“Always the university must foster the search for truth….it is the search for truth and not truth which keeps civilization alive.”

GREETINGS FROM THE PRINCIPAL

Welcome to the 2012/2013 academic year at U of T Scarborough (UTSC). As one of the three campuses of the University of Toronto, we continue to build on our reputation as a place of choice to study, teach, work, and conduct research. We are focused on growth and development and continue to invest in our academic departments, ensuring that we remain focused on scholastic excellence.

New and emerging areas of study at the undergraduate and graduate level are enhancing our academic offerings and responding to the needs of our students. Unique Masters and Ph.D. programs are also being developed in particular areas in science, the environment, humanities, and business. Our Ph.D. in Environmental Science is in high demand across the country and beyond. This unique degree assists in preparing the next generation of scientists to help close the knowledge gap to address environmental challenges.

In addition to the new and emerging areas of scholarship here at UTSC, we offer the University’s only formal co-operative programs including the highly sought after Bachelor of Business Administration degree. Another aspect of our experiential learning platform is our joint programs with Centennial College that address the value placed on blending theory and practice.

The Concurrent Teacher Education Program (CTEP) was developed in collaboration with the Ontario Institute for Studies in Education (OISE) at U of T and provides a direct route to becoming a school teacher in the fields of Chemistry, Mathematics, Physics, and French. We are firmly committed to creating a student experience that contributes to your long term goals. We are uniquely positioned to provide an intellectual, cultural, and social hub for the eastern Greater Toronto Area, a region identified by all levels of government as a centre of dramatic population growth that will see a boom in economic development in the decades to come. In fact, I believe the boom has already begun.

The vital expansion of our UTSC North Campus is now under way and the recently opened Instructional Centre Complex is a welcome addition to our learning space. Other North Campus land is being prepared for the future Pan Am Games Aquatic Centre and Field House Complex, which will provide a tremendous opportunity for UTSC to offer improved athletics and wellness facilities on a world class scale.

You are part of a transformative time in the life of UTSC. Take advantage of the many opportunities that are being created for you. Enjoy your journey with us.

Best wishes for a successful year,

Franco J. Vaccarino, Ph.D.
Principal, University of Toronto Scarborough
Vice President, University of Toronto
<table>
<thead>
<tr>
<th>Greetings from the Principal</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement of Institutional Purpose</td>
<td>4</td>
</tr>
<tr>
<td>Statement on Human Rights</td>
<td>4</td>
</tr>
<tr>
<td>Important Notices</td>
<td>4</td>
</tr>
<tr>
<td>Sessional Dates</td>
<td>6</td>
</tr>
<tr>
<td>Officials of the University of Toronto</td>
<td>8</td>
</tr>
<tr>
<td>Senior Administrators of the University of Toronto Scarborough</td>
<td>8</td>
</tr>
<tr>
<td>Departmental Structure</td>
<td>9</td>
</tr>
<tr>
<td>University of Toronto Scarborough: Past, Present &amp; Future</td>
<td>9</td>
</tr>
<tr>
<td>Writing at U of T Scarborough</td>
<td>10</td>
</tr>
<tr>
<td>Academic Resources and Student Services</td>
<td>10</td>
</tr>
<tr>
<td>Degrees</td>
<td>18</td>
</tr>
<tr>
<td>Programs of Study</td>
<td>19</td>
</tr>
<tr>
<td>Co-operative Programs General Information</td>
<td>21</td>
</tr>
<tr>
<td>Joint Programs with Centennial College</td>
<td>23</td>
</tr>
<tr>
<td>Language Citation</td>
<td>23</td>
</tr>
<tr>
<td>Guide to Programs &amp; Courses Offered</td>
<td>24</td>
</tr>
<tr>
<td>Programs</td>
<td>24</td>
</tr>
<tr>
<td>Courses</td>
<td>27</td>
</tr>
<tr>
<td>How to Read a Course Description</td>
<td>29</td>
</tr>
<tr>
<td>Program and Course Descriptions</td>
<td>30</td>
</tr>
<tr>
<td>Admissions</td>
<td>312</td>
</tr>
<tr>
<td>Academic Awards and Scholarships</td>
<td>314</td>
</tr>
<tr>
<td>Academic Regulations</td>
<td>316</td>
</tr>
<tr>
<td>Course Selection</td>
<td>318</td>
</tr>
<tr>
<td>Overall Standing</td>
<td>321</td>
</tr>
<tr>
<td>Examinations</td>
<td>326</td>
</tr>
<tr>
<td>Special consideration, petitions and appeals</td>
<td>327</td>
</tr>
<tr>
<td>University of Toronto Policies</td>
<td>331</td>
</tr>
<tr>
<td>Index</td>
<td>332</td>
</tr>
<tr>
<td>Changes to the 2012-13 Calendar</td>
<td>337</td>
</tr>
</tbody>
</table>

For updates to this Calendar, check www.utsc.utoronto.ca/calendar. Please note that not all courses listed in this Calendar are offered every year. For course timetables, visit www.utsc.utoronto.ca/timetable
Statement of Institutional Purpose

Below is an extract of the University of Toronto's Statement of Institutional Purpose. To see the statement in its entirety, refer to the Governing Council website at: www.governingcouncil.utoronto.ca/policies.htm

PURPOSE OF THE UNIVERSITY

The University of Toronto is dedicated to fostering an academic community in which the learning and scholarship of every member may flourish, with vigilant protection for individual human rights, and a resolute commitment to the principles of equal opportunity, equity and justice.

THE UNIVERSITY COMMUNITY

The University of Toronto believes that it best serves Canada and the wider world by pursuing, to the limit of its abilities, its fundamental mandates of research and teaching in the spirit of academic freedom. In seeking to achieve the above objectives, the University of Toronto is committed to four principles:

1. Respect for intellectual integrity, freedom of enquiry and rational discussion;
2. Promotion of equity and justice within the University and recognition of the diversity of the University community;
3. A collegial form of governance;
4. Fiscal responsibility and accountability.

The University values its graduates as life-long members of the University community who make significant contributions to its ongoing life and reputation.

The University recognizes that in the foreseeable future the majority of its funding will come from public sources, and thanks the people of Ontario and of Canada for this support.

Statement on Human Rights

Acknowledging its fundamental and distinctive commitment to freedom of thought, inquiry, and expression, the University of Toronto affirms its commitment to the values of equal opportunity, equity and social justice. In this affirmation, the University:

- Acknowledges that it conducts its teaching, research and other activities in the context of a richly diverse society;
- Recognizes that the attainment of excellence in pursuit of its mission is furthered by the contribution made by persons reflecting this rich diversity;
- Acts within its purview to prevent or remedy discrimination or harassment on the basis of race, gender, sexual orientation, age, disability, ancestry, place of origin, colour, ethnic origin, citizenship, creed, marital status, family status, receipt of public assistance or record of offence;

Important Notices

1. Changes in Programs of Study (Subject POSs) and/or Courses

The programs of study that the Calendar lists and describes are available for the year(s) to which the Calendar applies. They may not necessarily be available in later years. If the University or the Faculty must change the content of programs of study or withdraw them, all reasonable possible advance notice and alternative instruction will be given. The University will not, however, be liable for any loss, damages, or other expenses that such changes might cause.

For each program of study offered by the University through the Faculty, the courses necessary to complete the minimum requirements of the program will be made available annually. We must, however, reserve the right otherwise to change the content of courses, instructors and instructional assignments, enrolment limitations, prerequisites and corequisites, grading policies, requirements for promotion and timetables without prior notice.

2. Regulations and Policies

As members of the University of Toronto community, students assume certain responsibilities and are guaranteed certain rights and freedoms. The University has several policies that are approved by the Governing Council and which apply to all students. Each student must become familiar with the policies. The University will assume that he or she has done so. The rules and regulations of the Faculty are listed in this Calendar. In applying to the Faculty, the student assumes certain responsibilities to the University and the Faculty and, if admitted and registered, shall be subject to all rules, regulations and policies cited in the Calendar, as amended from time to time.

All University policies can be found at: www.governingcouncil.utoronto.ca/policies.htm
Those which are of particular importance to students are:
- Code of Behaviour on Academic Matters
- Code of Student Conduct
- Grading Practices Policy
- Policy on Official Correspondence with Students

More information about students' rights and responsibilities can be found at: http://life.utoronto.ca/get-help/rights-responsibilities.htm
3. **Enrolment Limitations**
   The University makes every reasonable effort to plan and control enrolment to ensure that all of our students are qualified to complete the programs to which they are admitted, and to strike a practicable balance between enrolment and available instructional resources. Sometimes such a balance cannot be struck and the number of qualified students exceeds the instructional resources that we can reasonably make available while at the same time maintaining the quality of instruction. In such cases, we must reserve the right to limit enrolment in programs, courses, or sections, and to withdraw courses or sections for which enrolment or resources are insufficient. The University will not be liable for any loss, damages, or other expenses that such limitations or withdrawals might cause.

4. **Copyright in Instructional Settings**
   If a student wishes to tape-record, audio-record, photograph, video-record or otherwise reproduce lecture presentations, course notes or other similar materials provided by instructors, he or she must obtain the instructor's written consent beforehand. Otherwise all such reproduction is an infringement of copyright and is absolutely prohibited. In the case of private use by students with disabilities, the instructor's consent will not be unreasonably withheld.

5. **Person ID (Student Number)**
   Each student at the University is assigned a unique identification number. The number is confidential. The University, through the Policy on Access to Student Academic Records, strictly controls access to Person ID numbers. The University assumes and expects that students will protect the confidentiality of their Person IDs.

6. **Fees and Other Charges**
   The University reserves the right to alter the fees and other charges described in the Calendar. Note: Specific tuition and fees information can be found at www.fees.utoronto.ca

7. **Notice of Collection of Personal Information**
   The University of Toronto respects your privacy. Personal information that you provide to the University is collected pursuant to section 2(14) of the University of Toronto Act, 1971. It is collected for the purpose of administering admission, registration, academic programs, university-related student activities, activities of student societies, financial assistance and awards, graduation and university advancement, and for the purpose of statistical reporting to government agencies. At all times it will be protected in accordance with the Freedom of Information and Protection of Privacy Act. If you have questions, please refer to www.utoronto.ca/privacy or contact the University Freedom of Information and Protection of Privacy Coordinator at 416-946-7303, McMurrich Building, Room 104, 12 Queen's Park Crescent West, Toronto, ON, M5S 1A8.
   An expanded version of this Notice can be found at www.fippa.utoronto.ca

8. **Separate Calendars**
   Separate Calendars are published by the Faculty of Arts and Science and by the University of Toronto Mississauga. Students are reminded that the University of Toronto Scarborough is a separate faculty of the University and that rules covering students registered at University of Toronto Scarborough may differ from those elsewhere in the University.

9. **Responsibility of Students**
   It is the responsibility of students to see that their academic programs meet University of Toronto Scarborough's regulations in all respects. Supervisors of Studies, departmental assistants and academic advisors are available to give advice and guidance, but it must be clearly understood that THE ULTIMATE RESPONSIBILITY RESTS WITH THE STUDENT for completeness and correctness of course selection, for compliance with prerequisite, co-requisite requirements, etc., for completion of Program details, for proper observance of degree requirements and for observance of regulations, deadlines, etc. Students are responsible for seeking guidance from a responsible officer if they are in any doubt; misunderstanding, or advice received from another student will not be accepted as cause for dispensation from an regulation, deadline, program or degree requirement.

10. **Calendar and Calendar changes**
    The information published in this Calendar outlines the rules, regulations, curricula and programs for the University of Toronto Scarborough. The University of Toronto Scarborough reserves the right to change without notice any information contained in this Calendar, including any rule or regulation. The publication of information in this Calendar does not bind the University to the provision of courses, programs or facilities as listed herein. Go to Quick Links at www.utsc.utoronto.ca for the most up-to-date copy of this Calendar. You will also find any amendments to the Calendar posted there. The Calendar is published in both online and printed editions. Every effort has been made to ensure the compatibility of both versions. In the case of any discrepancy, the online version shall apply. Any post-publication corrections and/or updates to the print edition of this Calendar will be posted on the Registrar’s website (www.utsc.utoronto.ca/registrar). Students are strongly advised to check back regularly to keep informed of changes.

11. **AcaDemic Offences Are A SeRious Matter**
    See the Code of Behaviour on Academic Matters at www.governingcouncil.utoronto.ca/policies.htm

12. **Class attendance**
    Class attendance is an important aspect of university studies. Though it is not mandatory, students are likely to place themselves at a distinct disadvantage if they do not attend. They cannot expect any special consideration on the grounds of non-attendance. In particular, newly-admitted students who are unable to attend during the first two weeks of classes are strongly advised to consider waiting until a future session before beginning their studies. (New students who decide to wait until a future session should contact Admissions and Student Recruitment to arrange a formal deferralment of the Offer of Admission.)

13. **Official correspondence**
    Students are responsible for ensuring that ROSI contains a valid postal address and a university-issued email address (see the Policy on Official Correspondence with Students at www.governingcouncil.utoronto.ca/policies.htm).
    **Note**: Email is the University's primary method of communicating with students regarding registration, ROSI notices, student accounts and other important business. All U of T students are provided with an official utoronto.ca email address. Setting up this official account is mandatory for all University of Toronto students. Instructions to do so are available at http://its.utsc.utoronto.ca
### 14. Procedure for Rescheduling Exams Cancelled because of Winter Weather conditions

If the campus is closed because of inclement weather for a day or part of a day during the December exam period, all missed examinations will be rescheduled on the first Saturday of the Winter term. For each rescheduled exam, the time and room location will be the same as for the originally scheduled examination. A notice to this effect will be posted on the UTSC homepage and the campus Snow Line (416-287-7026).

### Sessional Dates

There are three academic sessions: Summer Session (May to August), Fall Session (September to December) and Winter Session (January to April). For dates related to courses on other campuses, see the appropriate Calendar or registration guide. Please refer to the Registrar’s Office website at www.utsc.utoronto.ca/registrar for other important registration, financial and petition deadlines.

<table>
<thead>
<tr>
<th>ROSI section code</th>
<th>Duration of course</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>May - June</td>
</tr>
<tr>
<td>S</td>
<td>June - August</td>
</tr>
<tr>
<td>Y</td>
<td>May - August</td>
</tr>
</tbody>
</table>

**For ROSI hours on deadline dates, go to www.rosi.utoronto.ca/hours.html**

### 2012 Summer Session

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, April 30</td>
<td>Last day to pay fees.</td>
</tr>
<tr>
<td>Monday, May 7</td>
<td>Classes begin in F and Y courses.</td>
</tr>
<tr>
<td>Sunday, May 13</td>
<td>Last day for students writing deferred examinations in August to adjust their current course load (on ROSI only).</td>
</tr>
<tr>
<td>Monday, May 21</td>
<td>Last day to add F and Y courses (on ROSI only).</td>
</tr>
<tr>
<td>Monday, May 21</td>
<td>Victoria Day  University closed.</td>
</tr>
<tr>
<td>Monday, June 11</td>
<td>Last day to drop F courses without academic penalty and have them removed from the transcript.</td>
</tr>
<tr>
<td>Tuesday, June 12 - Monday, June 18</td>
<td>Last week of classes in F courses. (Final examinations will be held in a class period during this week.)</td>
</tr>
<tr>
<td>Tuesday, June 26 - Friday, June 29</td>
<td>Reading Week. (Note: Classes or exams may be held on other campuses.)</td>
</tr>
<tr>
<td>Monday, July 2</td>
<td>Canada Day  University closed.</td>
</tr>
<tr>
<td>Tuesday, July 3</td>
<td>Classes resume in S and Y courses.</td>
</tr>
<tr>
<td>Monday, July 9</td>
<td>Last day to add S courses.</td>
</tr>
<tr>
<td>Monday, July 23</td>
<td>Last day to drop Y courses without academic penalty and have them removed from the transcript.</td>
</tr>
<tr>
<td>Monday, July 30</td>
<td>Last day to drop S courses without academic penalty and have them removed from the transcript.</td>
</tr>
<tr>
<td>Wednesday, August 1</td>
<td>Last day to confirm intention to graduate at the 2012 Fall Convocation.</td>
</tr>
<tr>
<td>Monday, August 6</td>
<td>Civic Holiday  University Closed</td>
</tr>
<tr>
<td>Tuesday, August 7</td>
<td>Last day of classes and last day for submission of term assignments in S and Y courses. (Note: Classes are held on this date only for courses that normally meet on a Monday.)</td>
</tr>
<tr>
<td>Wednesday, August 8 - Sunday, August 12</td>
<td>Study Break.</td>
</tr>
<tr>
<td>Wednesday, August 8 - Tuesday, August 28</td>
<td>2012 Winter deferred examinations.</td>
</tr>
<tr>
<td>Sunday, August 12</td>
<td>Last day to drop UTSC S and Y courses (on eService only) and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are assigned whether or not course work is completed (with a '0' assigned for incomplete work) and are calculated into GPAs. (Note: See <a href="http://www.utsc.utoronto.ca/registrar">www.utsc.utoronto.ca/registrar</a> for LWD dates for courses on other campuses.)</td>
</tr>
<tr>
<td>Monday, August 13 - Tuesday, August 28</td>
<td>Final examinations in S and Y courses.</td>
</tr>
</tbody>
</table>
### 2012 Fall Session

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>November TBA</td>
<td>2012 Fall Convocation. Check &quot;Ceremony Dates&quot; at <a href="http://www.convocation.utoronto.ca">www.convocation.utoronto.ca</a> for the date of the UTSC ceremony.</td>
</tr>
<tr>
<td>Friday, August 17</td>
<td>Last day to pay fees.</td>
</tr>
<tr>
<td>Monday, September 3</td>
<td>Labour Day → University closed.</td>
</tr>
<tr>
<td>Monday, September 10</td>
<td>Classes begin in F and Y courses.</td>
</tr>
<tr>
<td>Sunday, September 16</td>
<td>Last day for students writing deferred examinations in December to adjust their current course load (on ROSI only).</td>
</tr>
<tr>
<td>Sunday, September 23</td>
<td>Last day to add F and Y courses (on ROSI only).</td>
</tr>
<tr>
<td>Monday, October 8</td>
<td>Thanksgiving Day → University closed.</td>
</tr>
<tr>
<td>Monday, November 19</td>
<td>Last day to drop F courses without academic penalty and have them removed from the transcript.</td>
</tr>
<tr>
<td>Monday, December 3</td>
<td>Last day of classes and last day for submission of term assignments in F courses.</td>
</tr>
<tr>
<td>Tuesday, December 4 - Thursday, December 6</td>
<td>Study Break.</td>
</tr>
<tr>
<td>Tuesday, December 4 - Friday, December 21</td>
<td>2012 Summer deferred examinations.</td>
</tr>
<tr>
<td>Thursday, December 6</td>
<td>Last day to drop UTSC F courses (on eService only) and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are recorded on transcripts whether course work is completed or not (with a '0' assigned for incomplete work) and they are calculated into GPAs. (Note: See <a href="http://www.utsc.utoronto.ca/registrar">www.utsc.utoronto.ca/registrar</a> for LWD dates for courses on other campuses.)</td>
</tr>
<tr>
<td>Friday, December 7 - Friday, December 21</td>
<td>Final examinations in F courses.</td>
</tr>
<tr>
<td>Monday, December 24 - Friday, January 4</td>
<td>December break → University closed.</td>
</tr>
<tr>
<td>Friday, February 15</td>
<td>Last day to confirm intention to graduate at the 2013 Spring Convocation.</td>
</tr>
</tbody>
</table>

### 2013 Winter Session

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, November 27</td>
<td>Last day to pay fees if enrolled in S courses only.</td>
</tr>
<tr>
<td>Monday, January 7</td>
<td>Classes begin in S courses and resume in Y courses.</td>
</tr>
<tr>
<td>Sunday, January 13</td>
<td>Last day for students writing deferred examinations in April to adjust their current course load (on ROSI only).</td>
</tr>
<tr>
<td>Sunday, January 20</td>
<td>Last day to add S courses (on ROSI only).</td>
</tr>
<tr>
<td>Friday, February 15</td>
<td>Last day to confirm intention to graduate at the 2013 Spring Convocation.</td>
</tr>
<tr>
<td>Monday, February 18</td>
<td>Last day to drop Y courses without academic penalty and have them removed from the transcript (on ROSI only).</td>
</tr>
<tr>
<td>Monday, February 18</td>
<td>Family Day holiday → University closed.</td>
</tr>
<tr>
<td>Tuesday, February 19 - Friday, February 22</td>
<td>Reading Week → No classes held.</td>
</tr>
<tr>
<td>Monday, February 25</td>
<td>Classes resume in S and Y courses.</td>
</tr>
<tr>
<td>Sunday, March 24</td>
<td>Last day to drop S courses without academic penalty and have them removed from the transcript (on ROSI only).</td>
</tr>
<tr>
<td>Friday, March 29</td>
<td>Good Friday → University closed</td>
</tr>
<tr>
<td>Monday, April 8</td>
<td>Last day of classes and last day for submission of term assignments in S and Y courses. (Note: Classes are held on this date only for courses that normally meet on a Friday.)</td>
</tr>
<tr>
<td>Tuesday, April 9 - Sunday, April 14</td>
<td>Study Break.</td>
</tr>
<tr>
<td>Tuesday, April 9 - Tuesday, April 30</td>
<td>2012 Fall deferred examinations.</td>
</tr>
<tr>
<td>Sunday, April 14</td>
<td>Last day to drop UTSC S and Y courses (on eService only) and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are recorded on transcripts whether course work is completed or not (with a '0' assigned for incomplete work) and they are calculated into GPAs. (Note: See <a href="http://www.utsc.utoronto.ca/registrar">www.utsc.utoronto.ca/registrar</a> for LWD dates for courses on other campuses.)</td>
</tr>
<tr>
<td>Monday, April 15 - Tuesday, April 30</td>
<td>Final examinations in S and Y courses.</td>
</tr>
<tr>
<td>June TBA</td>
<td>2013 Spring Convocation. Check &quot;Ceremony Dates&quot; at <a href="http://www.convocation.utoronto.ca">www.convocation.utoronto.ca</a> for the date of the UTSC ceremonies.</td>
</tr>
</tbody>
</table>
Examination schedules
Examination schedules are posted on the web at: www.utsc.utoronto.ca/registrar as soon as they are finalized.
The date of posting is normally no later than:

- **August examination period:** Mid-July
- **December examination period:** Mid-November
- **April examination period:** Mid-March

**Note:** Examinations (including deferred examinations) and term tests may be held on any day of the week. Every effort will be made to avoid scheduling them on Sundays, however, U of T Scarborough reserves the right to do so if necessary.

Officials of the University of Toronto

A list of officials of the University of Toronto can be found at: www.governingcouncil.utoronto.ca/AssetFactory.aspx?did=3894

Senior Administrators of the University of Toronto Scarborough

- **Principal (U of T Scarborough) & Vice-President (U of T)**
  Franco J. Vaccarino, Ph.D.
- **Dean & Vice-Principal (Academic)**
  Rick Halpern, Ph.D.
- **Vice-Principal, Research**
  Malcolm M. Campbell, M.A., Ph.D.
- **Vice-Dean, Graduate Education & Program Development**
  W.A. Gough, B.Sc., M.Sc., Ph.D.
- **Vice-Dean, Undergraduate**
  Professor John Scherk
- **Chief Strategy Officer**
  Andrew Arifuzzaman
- **Chief Administrative Officer**
  TBD
- **Dean of Student Affairs,**
  Desmond Pouyat, B.A., M.S.W.
- **Assistant Dean**
  Lesley Lewis, B.A., M.I.St.
- **Associate Dean**
  Liang H. Chen, B.A., MSED., M.BA., Ph.D., FCGA
- **Registrar & Director of Enrolment Management**
  Curtis Cole, Ph.D.

- **Director of Human Resource Services**
  Kim Richard, B.Sc., M.Ed.
- **Executive Director, Development and Alumni Relations**
  G. Zinaty, B.A., M.B.A.
- **Chair, Department of Biological Sciences**
  Professor Greg Vanlerberghe, B.Sc., M.Sc., Ph.D.
- **Chair, Department of Computer & Mathematical Sciences**
  Professor Vassos Hadzilacos, B.S.E., Ph.D.
- **Chair, Department of English**
  Professor C. Bolus-Reichert, M.A., Ph.D.
- **Chair, Department of Humanities**
  Professor William Bowen, B.A., B.Mus., A.R.C.T., A.R.C.M., M.A., Ph.D.
- **Chair, Department of Management**
  Professor David Zweig, B.A., M.Sc., Ph.D.
- **Chair, Department of Philosophy**
  Professor P. Kremer, B.Sc., Ph.D.
- **Chair, Department of Physical & Environmental Sciences**
  Professor W.A. Gough, B.Sc., M.Sc., Ph.D.
- **Chair, Department of Psychology**
  Professor John Bassili, B.A., Ph.D.
- **Chair, Department of Social Sciences**
  Professor M. Hoffman, B.S., Ph.D.
U of T Scarborough Departmental Structure

Department of Biological Sciences:
Applied Microbiology
Biology
Paramedicine

Department of Computer & Mathematical Sciences:
Computer Science
Mathematics
Statistics

Department of English:
English

Department of Humanities:
African Studies
Classical Studies
Global Asia Studies
History
Humanities
Intersections, Exchanges, Encounters in the Humanities
Journalism
Languages and Linguistics
Media Studies
New Media Studies
Religion
Visual and Performing Arts
Women's and Gender Studies

Department of Management:
Economics for Management Studies
Management

Department of Philosophy:
Philosophy

Department of Physical & Environmental Sciences:
Astronomy
Chemistry
Environmental Science
Environmental Science and Technology
Physical Sciences
Physics and Astrophysics

Department of Psychology:
Neuroscience
Psychology

Department of Social Sciences:
Anthropology
City Studies
Diaspora and Transnational Studies
Geography
Health Studies
International Development Studies
International Studies
Political Science
Sociology

University of Toronto Scarborough: Past, Present & Future

The University of Toronto (U of T), founded in 1827, has degree-granting authority from the Province of Ontario. It is a member of the Association of Universities and Colleges of Canada, the Association of Commonwealth Universities, and one of only two Canadian members of the Association of American Universities. University of Toronto Scarborough (UTSC) is one of three campuses of U of T [St. George and University of Toronto Mississauga (UTM) are the others].

Since its founding in 1964 as a satellite undergraduate campus of U of T, UTSC has grown to become a key component of Canada’s leading research-intensive university. Today, the UTSC campus is equivalent to a comprehensive, mid-sized Ontario university, boasting more than 10,000 undergraduate students, 225 graduate students, and nearly 700 faculty and staff.

UTSC’s guiding philosophy is that the best university learning environment combines academic excellence with meaningful engagement. Our students, faculty, and staff share a passion for deep, intellectual inquiry, but also for expanding our horizons through the connections we make with the world around us. The high value we place on interaction results from our beginnings as a small, close-knit U of T campus.

UTSC is a unique option in the university sector. It is a place where scholars contribute to cutting-edge knowledge in their fields, and where the finest students are taught by the finest professors. But there’s more to our story. Experiential education is a hallmark of our approach. We strive to give students a head-start on their future by enhancing their academic studies with U of T’s only formal co-operative education program. We also offer many other supplemental opportunities such as internships, hands-on research, volunteerism in the community, and co-curricular participation in campus life.

Upon graduation, our students have earned one of the most rigorous and respected post-secondary degrees in the world. But they also have the experience, skills, and self-confidence they need to succeed in a rapidly changing and interconnected world. This unique combination of intellectual achievement and real-world experience is summed up in our tagline: Tomorrow is created here.

The academic division at UTSC has nine departments: Biological Sciences, Computer & Mathematical Sciences, English, Humanities, Management, Philosophy, Physical & Environmental Sciences, Psychology, and Social Sciences. The academic leaders are continuously introducing innovative programs that address the interests of today’s students and that reflect UTSC’s global...
Writing at U of T Scarborough

Writing at U of T Scarborough

Effective writing is foundational to the academic experience. Good thinking demands good writing; good writing reflects both sound learning and insightful teaching. Good writing is not only an index to intellectual clarity but the basis of meaningful communication.

It is the aim of the University of Toronto Scarborough to assist its students to achieve proficiency in writing, irrespective of their program. Students will be expected to learn how to frame an argument and support it, to research, critique and integrate materials from a variety of sources, and to present written work that is both cogent and precise. Individual disciplines may encourage their students to hone skills which are particular to their specific areas of study, but all are expected to help their students generate ideas, analyse their sources, and synthesize and interpret information in coherent forms of written expression. Some disciplines have identified writing-intensive courses which aim expressly at enhancing a student's writing ability. Others have adopted their own innovative ways of assisting students to develop and improve their writing skills. Specialized programs and courses in academic writing are available to non-native speakers of English through English Language Development. The U of T Scarborough Writing Centre is available to every student. These and other resources are in place to help ensure that all students, regardless of the point from which they begin, achieve a standard of written expression that is consistent with the rigour of their programs of study.

Academic Resources and Student Services

Academic Advising & Career Centre

The Academic Advising & Career Centre provides a comprehensive and integrated set of services to U of T Scarborough students. We help students become informed decision-makers and independent learners, to be motivated and goal-oriented - while maintaining a maximum degree of flexibility towards a range of academic and career goals. Our services include:

- Workshops and seminars on academic issues, learning skills, career and employment planning, research and management
- Individual appointments with career counsellors, employment coaches, academic advisors and peer counsellors
- Resource specialists who can provide information and referral
- Career Centre Online: access to electronic job postings for U of T students and databases for career information and international employment
- Special events, such as Experience UTSC, Professional and Graduate Schools Fair, Volunteer & Internship Fair, Summer Job Fair and International Experience Fair
- An interactive website: http://webapps.utsc.utoronto.ca/aaccweb/

Come see us in AC213 or phone 416-287-7561.
AccessAbility Services
University of Toronto’s Statement of Commitment Regarding Persons with a Disability

It is the University's goal to create a community that is inclusive of all persons and treats all members of the community in an equitable manner. In creating such a community, the University aims to foster a climate of understanding and mutual respect for the dignity and worth of all persons.

In working toward this goal, the University will strive to provide support for, and facilitate the accommodation of individuals with disabilities so that all may share the same level of access to opportunities, participate in the full range of activities that the University offers, and achieve their full potential as members of the University community.

The University will work to eliminate or minimize the adverse effects of barriers, including physical, environmental, attitudinal, as well as communication and technological barriers, which may prevent the full participation of individuals with disabilities in the University community.

The University will provide the members of its community with opportunities for education and access to information regarding disability and the University's policies on disability. At the same time, the University will endeavour to protect the individuals' privacy, confidentiality and autonomy.

The University re-affirms that all individuals are expected to satisfy the essential requirements of their program of studies or employment, while recognizing that students and employees with disabilities may require reasonable accommodations to enable them to do so. The University is, as always, committed to preserving academic freedom and its high level of academic standards.

The achievement of the University's goal depends on the participation of each and every member of the University community, including students, faculty, staff and alumni, as well as their respective representative organizations. Each of these parties has a role in creating an equitable and inclusive environment, as well as in the accommodation process and the identification, removal, and/or reduction of barriers. The consultative relationship among the members of the University community is based upon a shared desire for an open, supportive learning and working environment, and a shared respect for individual rights and dignity.

In working toward its goals under this Statement, the University is committed to acting conscientiously and in keeping with its own policies and existing legislation related to disability.

Responsibility of Students Who Have Disabilities

Students who request accommodations for their academic programs and/or related activities at the University have the responsibility to disclose their needs in a timely manner to facilitate the implementation of support and services. It is vitally important that students discuss their needs as early as possible with the Service in order to put accommodations in place. Students must present relevant and up-to-date documentation, as outlined on the website, from an appropriate health care professional.

AccessAbility Services

Services are provided to students who have a mental health disability, a learning disability, sensory (hearing/vision), or chronic health condition (e.g. epilepsy, cancer, bowel disease) an acquired brain injury, attention deficit disorder, or a temporary disability (e.g. a broken dominant arm). Students who register and utilize the services will not be identified on their transcript as receiving accommodations. Information disclosed to the service is confidential and is disclosed with the student's permission.

Examples of accommodations and support services include:

- Learning disability assessments
- Assistive technology assessments and equipment
- Learning strategy support
- Test and examination accommodations
- Note taking services
- Sign language interpreters; computerized note-taking
- Advice and information on disability issues
- Liaison to University and off-campus agencies

Voice/TTY: 416-287-7560
Room: SW302
Email: ability@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/ability

Athletics & Recreation

Our mission is: "We strive to create a respectful and inclusive environment that promotes opportunity and overall well-being through physical activity." The focus of the Department is to encourage participation in a broad spectrum of programs and activities. We offer various combinations and levels of intramural sports, inter-house leagues, tournaments, recreational play, instruction, and special events to promote skill development, leadership, social interaction and enjoyment for an active, healthy lifestyle.

Facilities:
Co-ed fitness/weight training facility 'THE KEY' and the Cardio Theatre space, Cycle-fit Room; The Pallandi Gymnasium - a double gym for basketball, volleyball, badminton, ball hockey, indoor soccer, indoor cricket etc.; Teaching Studio - for instructional and fitness classes; Athletics Lounge - study space, table tennis; seven air-conditioned North American squash courts, Golf "practice tee";
Varsity Blues Baseball Diamond, new Softball/Cricket pitch, two multi-purpose outdoor playing fields and eleven outdoor tennis courts in the valley; locker/shower areas - including men's and women's sauna; athletic service counter offering program and membership information as well as playing equipment rentals and various supplies.

Hours: Monday – Friday - 7:00 a.m. – 11:00 p.m.
Saturday - Sunday - 7:00 a.m. – 11:00 p.m.
(Hours are adjusted during exam periods, Winter holidays & summer months.)

Main Office: R247
General Info. 416-287-7099
E-mail: athletics@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/athletics

Centre for Teaching and Learning
Website: ctl.utsc.utoronto.ca/home/
CTL General Information 416-287-7504
English Language Development 416-287-7502
Faculty Teaching Consultation 416-287-7680
Facilitated Study Groups 416-208-2897
Educational Technology 416-287-7520
Math & Statistics Learning Centre 416-287-5667
Research Skills & Instruction 416-287-2708
Presentation Skills and Academic Communication 416-208-4895
Service Learning and Outreach 416-287-7557
Teaching Assistant Training & Graduate Student Support 416-287-7504
WebOption Lecturecasting 416-208-4732
The Writing Centre 416-287-7480

The Centre for Teaching and Learning works with faculty, students, teaching assistants and staff to promote, support, and enhance teaching and learning at U of T Scarborough.

For students, CTL addresses a diversity of student needs by supporting the student learning process. This includes Service Learning, Facilitated Study Groups, Writing Support (The Writing Centre), Research Skills, Presentation Skills, and skill development in Quantitative Analysis, mathematics, statistics, and data interpretation (via the Math & Statistics Learning Centre), as well as a wide array of English Language Development programs (via the English Language Development Centre), to strengthen oral and written communication skills. Individual appointments are supplemented with drop-in help sessions, interactive and Café-style game-based learning sessions, writing clinics, group seminars, workshops, and online resources. Summer Learning Institutes assist newly admitted students in making a successful academic transition to U of T Scarborough.

CTL assists faculty with all aspects of course design and implementation, and can include in-course presentations. Core expertise is available for help with (1) Teaching best practices, (2) Teaching Assistant Training, (3) Educational Technology, (4) Assignment design/implementation/marketing strategies in oral and written communication, data analysis, research and information literacy, and professional development as a teacher. CTL also supports innovative faculty projects that facilitate improved learning outcomes through its teaching grants. Services include faculty orientation programs, dossier construction assistance, teaching consultations, a lunch-time series, publications on teaching and learning, and support for teaching and learning scholarship.

For teaching assistants and graduate students, CTL provides an annual professional development conference, teaching consultations, and a program of seminars and workshops that lead to certificates through the Teaching Assistants Training Program (TATP).

CTL also offers credit courses for students across the disciplines to expand the scope of their academic engagement. See the Centre for Teaching and Learning section in the Calendar.

Department of Student Life
The Department of Student Life (DSL) cultivates strong communities. We create opportunities dedicated to the holistic development and empowerment of students who will live and lead with integrity, perseverance, and respect. We value the development of life time learners, leaders, and agents of positive community and global change.

Student Life encourages students to create their own experience through participation in diverse workshops, programs, events, and volunteering and paid positions. We engage and support students during every step of their university experience. First Year students enroll in our First Year Experience Program and receive a mentor who guides them through the transition into post-secondary education. Students can earn certificates through the Leadership and Development Program to build skills through workshops, hands on experience, and reflection. The DSL supports community outreach projects & provides students with the opportunity to volunteer and work as community ambassadors, mentors, and tutors. The International Student Centre provides comprehensive services and programs for international and internationally minded students: citizenship and advising, settlement, cultural events, and Study Abroad opportunities.
The Department of Student Life also provides official recognition and support to over 180 student organizations. The DSL provides student leaders with professional advice in the areas of organizational development, project management, event planning, budgeting, sponsorship and succession planning.

For more information on the Department of Student Life, please visit our website: www.utsc-studentlife.ca

Contact Information:
Student Centre, SL-157
Phone: 416-208-4760
Email: studentlife@utsc.utoronto.ca
Website: www.utsc-studentlife.ca

Health & Wellness Centre
Hours: Monday - Friday -- 9:00 a.m.- 4:45 p.m.
Room: SL270 (Student Centre)
Telephone: 416-287-7065
E-mail: health-services@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/wellness

We are your convenient and confidential medical clinic on campus - much like your family doctor’s office. The Health & Wellness Centre offers four services:

- **Health Care**: Provided daily by physicians and nurses for the treatment of minor illnesses, first aid, pregnancy tests, annual check-ups, birth control prescriptions and sales, STI tests including HIV/AIDS, and immunizations. Appointments are recommended. Walk-ins are accommodated when possible between the hours of 9:30am to 11:30am and 2:00pm to 4:30pm. Monday-Friday.

- **Personal Counselling**: Our staff includes a social worker, a psychotherapist, psychologists, psychiatrists, and a physician-counsellor. Each of these counsellors is trained to help with family problems, relationships, crisis counselling, anxiety, depression, stress management, sexuality, bereavement, and eating disorders. Appointments are required, except in crisis situations.

- **Health Promotion**: The aim is to support healthy lifestyle choices - this is an integral part of the services and the staff often collaborate with other student services such as Physical Education & Athletics to further enhance the quality of our outreach programs.

- **Administrative Services**: U of T Scarborough international students may pick up their UHIP cards here, and request assistance regarding their health care.

Information & Instructional Technology Services
Website: http://iits.utsc.utoronto.ca
IITS Faculty/Staff Help Desk: 416-287-7618
IITS Student Support Office: 416-287-7391

IITS is responsible for information technology services at U of T Scarborough. IITS designs and maintains the campus computer network and core IT services, provides campus-wide Help Desk support, advises on customized IT solutions, supports equipment in electronic classrooms and videoconferencing facilities, and provides technical support for campus special events.

For students, IITS provides network connectivity in student residences and maintains the wireless network on campus. IITS administers over 650 workstations in 19 public and teaching computing labs, and in the Library. Over 100 computer workstations are available 24/7. Users can also find computing kiosks dispersed throughout the campus for easy access to information.

International Student Centre at U of T Scarborough
The International Student Centre (ISC), Department of Student Life, serves and supports international and internationally-minded students at U of T Scarborough. The ISC at U of T Scarborough is an inclusive and positive space where students of all backgrounds can find community and benefit from information, programs and services.

We offer programs and services for students in the following areas:

- **International Students, Exchange Students & Newcomers to Canada**
  Advising and referral on Citizenship & Immigration Canada regulations, international student advising, orientation and transition services for new students, health insurance support, tax filing advice, cultural programming, and referrals to university and community services.

- **English Conversation Partners (ECP)**
  This service provides students with an opportunity to improve verbal communication skills and confidence in conversational English in a fun, safe and non-academic setting.
First Year Experience Program (FEP) for International Students

FEP allows new international students to learn about, and become adjusted to, university life at U of T Scarborough. New students will develop a network of friends and resources on campus. Student Mentors will assist new international students with their academic, social and cultural transition to U of T Scarborough.

Study Abroad

Information about U of T recognized opportunities to study in another country and earn credit towards your degree. Visit the ISC for information on Student Exchange, Study Elsewhere, Summer Abroad or the Explore Program.

Contact Information:
Location: Instructional Centre, IC345
Tel: 416-208-2905
Email: isc@utsc.utoronto.ca
Web: http://utsc-isc.ca
Our programs and services are open to all University of Toronto students. For more information about the ISC visit our website.

Library (U of T Scarborough)
Website: http://www.library.utoronto.ca/utsc
Library Circulation & Loans 416-287-7482
Library Reference Desk 416-287-7481
Library Information Line 416-287-7500 (pre-recorded information)
Library Research & Instruction 416-287-5665 (research appointments)
TCard Office 416-208-2660

Instruction
The expert team of Subject Librarians assists students with their assignments and research. In particular, students may meet with a Subject Librarian to receive personalized research assistance. Classroom and group instruction are also available by appointment.

Library Hours
Hours vary during the term. The Library offers extended hours during midterms and 24 hour access during final exam periods. Check the website or phone 416-287-7500.

Collections
The Library’s vast array of resources in electronic, print and other formats (maps, slides, CDs, DVDs, films, etc.) support U of T Scarborough’s curriculum and research needs. Many course items, both electronic and print, are available through course reserves at the Circulation desk. Library materials held at other U of T libraries are available via the catalogue by request within a few days.

Study space
Students are invited to use the library for research and study purposes. A variety of study spaces are available to suit your requirements: ubiquitous wireless access, single study carrels, group tables, group study rooms, ultra quiet study space and media viewing facilities. The Library’s Sun Informatics Commons features over 100 networked workstations providing access to electronic collections held by the University of Toronto Libraries.

T-Card
The TCard Office, located in the Library, issues TCards for faculty and staff, re-issues student TCards, issues GO Transit Student ID cards, and handles the cash-to-card transactions.

N’sheemaehn: Child Care Centre
Hours: Monday - Friday - 7:30 a.m. - 6:00 p.m.
E-mail: childcare@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/childcare

Your child can be as close as your next lecture hall at N”sheemaehn (pronounced Nuh-shee-muh) located on the U of T Scarborough grounds. The Centre was constructed with children in mind. Its large, low level windows invite the natural environment inside and through which the children watch for birds, squirrels, raccoons and deer. Child size furniture, equipment, sinks and toilets enable children to develop independence and self-esteem.

The centre provides care and education for 54 children from birth to five years of age. Every day, children learn through play in a professional, nurturing, stimulating and safe environment. Children develop co-operative, empathetic negotiating skills and strategies to thrive today, and throughout their lifetime.

Meals and snacks are provided by an onsite chef, with attention to how they taste, look, and how nutritionally sound they are for growing and developing children. Allergies and food restrictions are accommodated.

This non-for-profit Centre is governed by a Board of Directors made up of volunteer parents and two U of T Scarborough appointees. Assistance with fees is available through a bursary for U of T Scarborough students, as well families can apply for a child care subsidy from the City of Toronto, Children’s Services. For more information about the Centre please visit our website or contact the Director, Joanne Quinn at 416-287-7624 to arrange a tour.
Office of the Registrar
The Office of the Registrar, located on the ground floor of the Arts & Administration Building, includes Admissions & Student Recruitment, Financial Aid & Awards Office and Registrarial Services.

Admissions & Student Recruitment
Office: Room AA128
Telephone: 416-287-7529
Website: www.utsc.utoronto.ca/admissions
Interactive FAQ Service: www.utsc.utoronto.ca/askus
Admissions & Student Recruitment coordinates off-campus recruitment activities and on-campus special events for prospective students. It also provides information and admissions counselling for applicants, assesses transfer credits and eligibility for admission. For a full description of procedures and policies, see the section on Admissions in the closing section of the Calendar.

Financial Aid & Awards
Office: Room AA142
Telephone: 416-287-7001, Press 1
Website: www.utsc.utoronto.ca/registrar
The Financial Aid & Awards Office (FAO) provides on-site financial aid services for full-time students and helps them access programs to help them pay for their education costs. Financial aid programs for part-time students are administered through the Financial Aid Office at the St. George campus, however, our FAO handles inquiries and provides a full range of assistance. Students who receive student loans from other provinces can access assistance and support from our office. Appointments to speak to a Financial Aid Advisor are available Monday through Friday and can be made through eService (on the Registrar's website).

We help students with processes relating to:
- Ontario Student Assistance Program (OSAP)
- Summer Work Study Plan
- UTAPS and bursaries
- In-course scholarships and awards
- Emergency situations (of a financial nature)
- Financial counselling: budgeting and payment plans, etc.

Registrarial Services
Office: Room AA142
Telephone: 416-287-7001
Website: www.utsc.utoronto.ca/registrar
Student Web Service: www.rosi.utoronto.ca
Interactive FAQ Service: www.utsc.utoronto.ca/askus
eService at: www.utsc.utoronto.ca/~registrar/general/eservice
Registrar's Office is the place to visit for help with registration, to request confirmation of your status at the university and to get answers for many of your general questions about academic regulations, degree requirements and re-enrolment for those students who are returning after suspension or a 12-month absence. We also produce student cards (T-Cards) for new students. Some of our services and processes can be requested online using eService. For office hours see our website.

Office of Student Affairs
Student Affairs supports student success. We strive to cultivate the intellectual and personal development of students within a community based on principles of mutual respect and inclusion.

The Student Affairs and Services division includes the following Departments:
- Academic Advising & Career Centre
- AccessAbility Services
- Health and Wellness Centre
- Department of Student Life & International Student Centre
- Physical Education and Athletics
- Office of Student Affairs
- Student Housing and Residence Life

The Office of Student Affairs provides administrative oversight and accountability to all departments within the division. It upholds the values of the commonly held mission statement and advises and seeks advice from student societies and the Council on Student Services (CSS), and advocates on issues of student concern to the Vice-President & Principal. The office offers support for a variety of initiatives, assists students in academic or personal difficulty, offers guidance to students planning events, and responds to student queries and referrals. The office also provides specialized IT support to departments and some student initiatives. The Dean of Student Affairs chairs the Academic Student Travel & Conference Fund. The Dean is a member of College Council, Planning & Budget, and Academic Committees. The Dean is also a member of the Principal’s Executive Group.
Academic Resources and Student Services

Contact Information:
Room: Student Centre, SL-157
Phone: 416-208-4760
Email: stuaff@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/stuaff

Office of the University Ombudsperson
As part of the University's commitment to ensuring that the rights of its individual members are protected, the University Ombudsperson investigates complaints from any member of the University not handled through regular University channels. The Ombudsperson is independent of all administrative structures of the University and is accountable only to Governing Council. In handling a complaint, the Ombudsperson has access to all relevant files and information and to all appropriate University officials. All matters are in strict confidence, unless the individual involved approves otherwise. The Ombudsperson offers advice and assistance and can recommend changes in academic or administrative procedures where this seems justified. For additional information, please visit our website at: www.utoronto.ca/ombudsperson
The services of the Office are available by appointment at all three UofT campuses. Please phone 416-946-3485 or e-mail us at ombuds.person@utoronto.ca.

Scarborough Campus Students' Union (SCSU)
Location: Student Centre, Room SL 108
Telephone: (416) 287-7047
Email: info@scsu.ca
Website: www.scsu.ca

The SCSU is your elected student body, representing all students at the University of Toronto Scarborough. It advocates on behalf of students on issues such as the cost of education, academic issues, and uniting the student voice to best represent their needs and concerns, whether it be the talk of having more diverse events on campus or advocating for more study space. Some of the student union’s services include:
- Lockers, Discount Movie tickets, TTC Metropasses
- Student Agendas, Anti-Calendar, Tax Clinics
- Clubs Funding, Club Lockers, Meeting Rooms and Multi-Faith Prayer Space
- SCSU Health & Dental Plan, Graduation Photos
- Orientation, Cultural Mosaic Show, Spring Formal

A growing number of important health-care services are not covered by provincial health care. The Plan is a service provided by the Scarborough Campus Student’s Union (SCSU) to fill the gap in government health care. All full-time UTSC students are automatically covered, including international and Co-op students on Academic Session. Co-op Students on a Work Term are not covered, but can enrol themselves during the Change-of-Coverage Period. Part-Time students, graduate students, and students on exchange from another university are not covered and may not enrol in the Plan.

The SCSU Health and Dental Plan’s Health, Vision and Travel Benefits include prescription medication, physiotherapist, chiropractor, massage therapist, vaccinations, medical equipment, eye exam, travel health coverage and more. The Dental Benefits include basic services such as check-ups, cleanings, fillings, x-rays, and extractions. For a complete list of benefits, visit www.ihaveaplan.ca or call Member Services Centre at 1-866-369-8797.

Sexual Harassment Office
The University’s Sexual Harassment Policy covers harassment based on sex and sexual orientation and applies to students, staff and faculty members. The University of Toronto does not tolerate any form of sexual harassment and is actively endeavouring to provide an environment free of it. All forms of sexual harassment, from verbal abuse to unwanted touching to homophobic insult are covered by the University's policy. The Sexual Harassment Officer provides education to the community, administers the formal complaint procedure and offers non-partisan advice and counsel to those involved in the complaint process. Contacting the Sexual Harassment Officer is not a commitment to filing a complaint; people can contact the office on an anonymous basis simply for advice.

All complaints and requests for information are kept completely confidential unless the individuals involved approve otherwise. Members of the University of Toronto Scarborough may arrange an appointment at U of T Scarborough with the Sexual Harassment Officer or may go to the St. George campus, whichever is more convenient. For an appointment, information, or to arrange educational sessions, or to file a complaint, contact the Sexual Harassment Office (telephone 416-978-3908). Further information is available at www.utoronto.ca/sho. For information about online harassment go to www.enough.utoronto.ca

Student Housing & Residence Life
The residence experience at the University of Toronto Scarborough offers a transition to independence in a vibrant on-campus community that supports academic achievement and personal growth. This is achieved by offering well maintained facilities, an engaging and supportive residence life program, sincere service, and a high level of response to students’ needs. Student leaders, community members and staff, work towards creating an inclusive community that respects the diversities within the student body.
Academic Resources and Student Services

Residence Advisors and Academic Programmers & Promoters support residents. These senior students living in residence, serve to make the residence environment comfortable, supportive, and conducive to learning. The Student Residence Council is also a group of student leaders in residence who organize events and services for residents. Our fully furnished townhouses and apartments with well-equipped kitchens, are located minutes from the academic buildings and the Residence Centre (RC) which features community space for events, studying, and socializing as well as the administrative offices for Student Housing & Residence Life. There are 114 self-contained townhouses and 55 self-contained apartments accommodating 765 students; with four to six students in each house and four students in each apartment suite. Single and shared bedrooms are available. Common laundry rooms are available throughout the residences. Five houses and one apartment are specially designed as barrier free accommodation for students with AccessAbility requirements.

Residence is guaranteed to all full-time first-year students who are offered admission and who respond to all residence application deadlines and meet all deposit requirements. Part-time students and those who receive late offers are advised to contact Student Housing & Residence Life for further information although there is no guarantee that they will receive accommodation on campus. Accommodation is available for fall, winter, and summer sessions. We encourage you to visit the campus during the summer and to tour the residences.

For more information, contact:
Student Housing & Residence Life, University of Toronto Scarborough, 1265 Military Trail, Toronto, ON, M1C 1A4
Telephone: 416-287-7365
Fax: 416-287-7667
E-mail: residences-office@utsc.utoronto.ca
Web site: www.utsc.utoronto.ca/residences

University of Toronto Scarborough Community Police
A Special Constable Service
Office Location SW304 (Science Wing)
Emergency: 416-287-7333
General: 416-287-7398
E-mail: communitypolice@utsc.utoronto.ca
Website: www.utsc.utoronto.ca/police
UTSC Patrol (formerly Walk Safer): 416-287-7022

U of T Scarborough Community Police are dispatched by the Communications Centre on the St. George campus. Please specify that you are calling from U of T Scarborough and be specific about your location.

The members of the U of T Community Police are Special Constables. They are sworn peace officers who are on duty 24 hours a day, 365 days a year to serve the University community. They work in partnership with the University community to provide a safe and secure environment in which to carry out daily activities.

The U of T Scarborough Community Police is the initial response agency for all emergencies and crises occurring on the Scarborough campus and should be notified immediately of any situation that jeopardizes the safety of any community member, or that threatens to disrupt the operations of the University.

The U of T Scarborough Community Police should be informed of ALL matters involving threats to personal safety and security, violations of federal, provincial or municipal laws or University policies.

Examples of these would include:
- Attempts to injure others or self
- Medical emergencies
- Alcohol related emergencies
- Threats
- Assaults
- Noise complaints
- Damage to property
- Theft of property
- Possession of drugs or weapons
- Any other situation that looks suspicious or causes concern.

The U of T Scarborough Community Police co-ordinate community and safety programs such as the UTSC Patrol, and the Lone Worker Program. The UTSC Patrol Program will provide you with an escort to any part of the campus at any time of day or night, including to or from your vehicle or public transportation. The Lone Worker Program will assist you in being comfortable working on any part of the campus at any time. The UTSC Special Constable Service also issues Crime Alerts and Community Information Bulletins and provides crime prevention and personal safety education and consultation. These bulletins are also listed on the UTSC Campus Police website at www.utsc.utoronto.ca/police

In an emergency on campus the Special Constables can be contacted by calling 416-287-7333 or for non-emergency matters at 416-287-7398. The U of T Community Police can also provide pay duty officers to address security concerns for all special functions.
Degrees

University of Toronto Scarborough students may earn an Honours Bachelor of Arts, an Honours Bachelor of Science or a Bachelor of Business Administration degree after completing the appropriate requirements listed below. In doing so, students are expected to adhere to the rules and regulations outlined in this Calendar. (Students who first registered at U of T Scarborough prior to the 2004 Summer Session may elect to receive a B.A. or a B.Sc. degree after having completed the requirements for a three-year (fifteen-credit) degree.)

Students in their graduating year who intend to take part in the next Convocation must notify the Registrar's Office of their intention either through ROSI or on a confirmation of graduation form by the deadline listed in the Sessional Dates section of this Calendar.

Degrees are conferred at university convocations, held twice annually: the Spring Convocation held in June and the Fall Convocation held in November. Students who have confirmed their intention to graduate will be sent an email to their UTORid account with information about their request and important dates and times in March for the June Convocation and in late October for the Fall Convocation. Final confirmation letter will be mailed, from the Office of the Vice-President, University of Toronto, Principal, U of T Scarborough. This letter is sent in mid to late May for June Convocation and in early November for the November Convocation. For detailed information about Convocation, please refer to the Registration Guide and www.utsc.utoronto.ca/registrar.

To determine if you have met degree and/or program requirements, login to Degree Navigator at www.rosi.utoronto.ca. For more information about Degree Navigator see the Student Web Service section of this Calendar.

Degree Requirements

The following requirements apply to all degree students who first completed courses as University of Toronto Scarborough degree students in the 2010 Summer Session or in a subsequent session.

To qualify for the degree, students must:
1. Pass at least twenty full credits.
2. Of the twenty credits, at least six full credits must be at the C-level and/or D-level, with at least one full credit at the D-level.
3. Of the twenty credits, at least one half credit must come from each of the following five breadth categories. (See the course description for the category to which the course belongs):
   a) Arts, literature and language
   b) History, philosophy and cultural studies
   c) Social and behavioural sciences
   d) Natural sciences
   e) Quantitative reasoning
4. Programs.
   a) For a Bachelor of Business Administration, complete a specialist program in Management or in Economics for Management Studies
   b) For an Honours B.A. or an Honours B.Sc., complete:
      i) one Specialist Program, or
      ii) two Major Programs, or
      iii) one Major Program and two Minor Programs.
5. Combinations of programs used to meet the program requirement must include at least twelve different full credits
6. Earn a cumulative grade point average of at least 1.60.

Note: Only Programs offered by the University of Toronto Scarborough may be used to fulfill degree requirements

Honours B.A. and Honours B.Sc. Degrees

The type of Honours degree students receive is determined by the Program(s) completed. See the program list in the Guide to Programs and Courses Offered for the type of degree towards which each Program leads. Students must monitor their own progress to degree completion.

- In order to receive a B.Sc., students must complete one of the following: One specialist, one of the two majors or two minor programs in the sciences.
- In order to receive a B.A., students must complete one of the following: One specialist, one major or two minor programs in the arts.
- Students who fulfill more than one requirement may select which degree they will receive.

Graduation with High Distinction and with Distinction

University of Toronto Scarborough students who have completed at least ten full credits while registered at University of Toronto Scarborough will graduate with high distinction if their cumulative grade point average is 3.50 or better and will graduate with distinction if their cumulative grade point average is between 3.20 and 3.49. Other students with a cumulative grade point average of 3.20 or better will be considered on an individual basis.
Transfer Students
Students transferring to the University of Toronto Scarborough are required to complete at least half of their credits and half of their Program requirements as University of Toronto Scarborough students. Students transferring from other divisions of the University of Toronto are exempt from this requirement.

Students began their degree program at UTSC:
- Prior to the 2010 Summer Session, should refer to the degree requirements outlined in the 2009/2010 Calendar.
- Prior to the 1989 Summer Session may, if they wish, complete the degree requirements outlined in the 1988/1989 Calendar.
- Prior to the 1980 Summer Session may, if they wish, complete the degree requirements outlined in the 1979/1980 Calendar.
For these students, the type of degree is determined by the number of science credits completed.

Three-Year Degree
UTSC has discontinued the three year degree. Students who began their degree program at UTSC prior to the 2004 Summer Session may still choose to complete a three-year degree. For three-year degree requirements, see the 2008/2009 Calendar.

Upgrading Three-Year Degrees
For information on upgrading three-year degrees, see the 2008/2009 Calendar.

"Second Degree" Requirements
Students beginning a second degree are normally exempted from first year of the degree requirements by being granted five (5.0) credits, regardless of the number of previous degrees. Students who hold a B.A., B.B.A. or B.Sc. from the University of Toronto will be considered for admission to a second degree Program only of a different type (e.g. students with a B.A. degree may only complete a B.B.A. or B.Sc. degree). Application for admission to a second degree Program is made through the Assistant Registrar, Admissions. Before applying, students are urged to consider if a second degree is actually required for their purposes, for example, a make-up year as a non-degree student may satisfy admission requirements for graduate school.

Certificate Program in Business
Students in this program must complete the following in order to qualify for the Certificate in Business:
1. Pass 6.0 full credits in Management and Economics for Management Studies, including ECMA01H3, ECMA05H3, MGTA03H3, & MGTA04H3.
2. Earn a cumulative grade point average of at least 2.00.
Students in their graduating session who intend to take part in the next Convocation must notify the Registrar's Office of their intention either through ROSI or on a confirmation of graduation form by the deadline listed in the Sessional Dates section of this Calendar.
University of Toronto Scarborough certificate students will graduate with honours if their cumulative grade point average is 3.20 or better.

Non-Degree Students
"Non-degree students" are students registered in degree courses at the University of Toronto Scarborough:
- who are not proceeding towards a University of Toronto degree or Certificate, or
- who have been admitted on an interim basis and who must meet certain conditions before admission as regular degree students.
Except for regulations concerning degree requirements and regulations where non-degree students are specifically exempted, all regulations apply equally to non-degree students and degree students. Where students have been admitted on an interim basis as non-degree students, the conditions of their admission supersede the normal regulations governing academic status.

Programs of Study
Programs are groupings of courses in one or more disciplines. Degree students must select and register in a Program or Programs following the session in which they receive their fourth credit. (Note: Some Programs have limited enrolment. See the Program descriptions for admission requirements or speak to the Program Supervisor.) A list of Programs may be found in the Guide to Programs and Courses Offered section of this Calendar. Only programs offered by the University of Toronto Scarborough may be used to meet the degree requirements.

Note: Successful completion of a program does not in itself ensure successful completion of the degree requirements. See the Degrees section of this Calendar.

Specialist Programs
Specialist Programs normally consist of twelve to sixteen full credits, including at least four full credits at the C- and/or D-level, of which one full credit must be at the D-level. They are designed to provide depth and intensity of study within a limited area defined as a discipline, a group of disciplines, or a particular theme or area of study.

Major Programs
Major Programs normally consist of seven to eight full credits, including at least two at the C- and/or D-level. They are designed to provide concentration in an area of study defined as a discipline, a group of disciplines or a particular theme or area of study.
Minor Programs
Minor Programs which consist of four full credits, including at least one full-credit at the C- and/or D-level are designed to provide study in a specific area for students desiring wide-ranging but coherent Programs of study in different areas of the curriculum.

Approved Individual Programs
Students may propose individual Programs of study, other than those described in this Calendar. Such proposals will be considered favourably only from students with cumulative grade point averages of 3.5 or greater. To be approved, individual Programs should specify four full credits for a Minor Program, six to eight full credits for a Major Program and ten to fourteen full credits for a Specialist Program. The courses should all be offered at U of T Scarborough and should form a logical program. The student should offer a rationale for the proposal. Proposals should be made to the Vice-Dean and must be submitted at least eight months prior to the session in which the student expects to graduate.

Co-operative Programs
Co-operative programs are enrichment Programs designed to integrate related, practical experience with regular University studies. All Co-operative Programs are either Specialist or Major Programs and may be taken only as part of a four-year degree. Major Co-operative Programs must be combined with another Major Program. Academic credits associated with the successful completion of work-term requirements are additional to the 20.0 normally required for a degree. For this reason, some Co-operative Programs may take up to five years to complete.

Joint Programs
Joint programs are offered in collaboration with Centennial College. All Joint Programs are either Specialist or Major Programs and may be taken only as part of an Honours degree. Joint Major Programs must be combined with another Major Program or two Minor Programs. In most cases, students also have the opportunity to qualify for a diploma or certificate from Centennial College, which may require one additional academic session. See specific program descriptions for more details.

Course selection and registration for Programs of study
1. Students are responsible for ensuring that their course selection will enable them to complete the requirements of their Program(s) by the time they complete their other degree requirements. In certain Programs, approval by the supervisor of some or all courses is necessary. In all Programs, the supervisor is available for advice concerning Program requirements and course selection.
2. While students with fewer than 4.0 credits are not required to select a Program, they should, when selecting their courses, consider carefully the requirements of any Programs they may later choose to follow. Supervisors, instructors in A-level courses and academic advisors may be consulted for assistance.
3. Students who have registered in a Program should consult annually with the supervisors of their Programs to ensure that their course selection will meet Program requirements.
4. Students must register in their Program(s) following the session in which they attain their fourth full credit.

Note: Successful completion of a program does not in itself ensure successful completion of the degree requirements. See the Degree's section of this Calendar.

Program Transfers
Students who wish to transfer from one Program to another after classes have started should discuss the proposed transfer with the supervisor of the new Program and notify the Registrar's Office of the change through ROSI.

Certification of completion of Programs
Completion of Programs is certified when the degree is conferred. Certification is given only for University of Toronto Scarborough programs. Students in their final year who have confirmed their intention to graduate at the next Convocation or who have confirmed that they are about to complete an upgraded degree do not have to request certification of completion of their Programs.

When Program requirements are changed, students may elect to satisfy the requirements in effect when the student first completed courses at U of T Scarborough or subsequent requirements if the student finds them more favourable. However, U of T Scarborough reserves the right to require substitution for courses which are no longer offered.

Regulations concerning Programs of study
1. Students may register in no more than three Programs at any one time (including no more than two Majors and/or Specialists) and may receive certification of completion of no more than three Programs.
2. Students may register in no more than one limited enrolment Specialist Program at any one time.
3. Students may register in no more than one Co-operative Program at any one time.
4. Where a student completes the requirements of a Minor Program and subsequently chooses to complete a Major or Specialist Program in the same area the student may use the courses already accredited to the Minor Program to fulfill the requirements of the Major or Specialist Program. Upon successful completion of the additional requirements, any previous certification of the Minor Program will be superseded on the student's transcript by certification of the Major or Specialist Program.
5. Where a student completes the requirements of a Major Program and subsequently chooses to complete a Specialist Program in the same area, the student may use the courses already accredited to the Major Program to fulfill the requirements of the
Co-operative Programs

Specialist Program. Upon successful completion of the additional requirements, any previous certification of the Major Program will be superseded on the student's transcript by certification of the Specialist Program.

6. Supervisors have the authority to deal with special circumstances concerning Program requirements. They may
   ▪ accredit to Program requirements, courses taken on other campuses of this University or at other Universities; and
   ▪ permit course substitutions or other modifications of Program requirements where they deem them appropriate.
   When special arrangements are made, students should ask their supervisor to record them on a Program exceptions form.

7. Students should note that certain Programs will require them to take some of their courses on the St. George Campus. However, only University of Toronto Scarborough Programs may be used to meet degree requirements.

8. Students intending to enrol in any course on another campus which they intend counting towards their Program should consult with their Program Supervisor first.

9. Students transferring from another institution to the University of Toronto Scarborough will be required to complete at least half of their credits and half of their Program requirements as University of Toronto Scarborough students. Students transferring from other divisions of the University of Toronto are exempt from this requirement.

Registration in Programs which have been Withdrawn

Normally students will not be allowed to register in Programs that have been withdrawn. However, where the required courses for the Programs are still offered or suitable substitutions are available, students who have completed at least four full credits at the end of the session in which the Program is withdrawn may still apply for admission to the Program. Such admission will be contingent on a written agreement with the Chair of the relevant Department (or delegate), stipulating the requirements to be met and a time limit for the student's completion of the Program. Students should note that the University is not obliged to make such arrangements.

Students currently registered in Programs that have been withdrawn will be able to complete their Programs within a specified time frame. U of T Scarborough will either offer the courses necessary for them to complete Program requirements or will make other appropriate arrangements such as course substitutions. Students should consult with the relevant Supervisor of Studies or the Chair of the Department in which the Program was offered.

Co-operative Programs

General Information

Co-operative Programs are enrichment programs designed to integrate related, practical experience with academic studies. All co-op programs are either Specialist or Major Programs and may be taken only as part of a four-year degree. Major Co-op Programs must be combined with another Major program. Academic credits associated with the successful completion of work-term requirements are additional to the 20.0 normally required for a degree. For this reason, some co-op programs may take up to five years to complete.

No student may be enrolled in more than one co-op program and all co-op students must be registered at U of T Scarborough in order to maintain their co-op status. For a listing of co-op programs, the academic supervisors, and the sponsoring academic Department, see the Guide to Programs and Courses Offered section of this Calendar.

Admission to Co-op Programs

In most cases, students may apply to enter co-op programs either directly from secondary school or after their first year of university studies.

Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, applicants must indicate the special code for the program on the Application for Admission to an Ontario University. See the Admissions section of this Calendar for deadlines.

Once U of T is notified of the application, applicants are given information about documents required to support it. Co-op programs require a Supplementary Application available at the Admissions and Student Recruitment website: www.utsc.utoronto.ca/admissions

Enrolment in co-op programs is limited. Admission is granted on the basis of applicants' academic performance and their interest, experience and potential ability. The Supplementary Application will indicate what information is required in addition to the academic record and it may include a statement of interest, information about volunteer and work experience and extracurricular activities. In some cases, an interview may be conducted, either in person or by telephone.

Current U of T Scarborough Students: For the minimum qualifications for consideration for entry into Co-op Programs following First Year, see the individual co-op program entries elsewhere in this Calendar. Application procedures can be found at the Registrar's Office website: www.utsc.utoronto.ca/subjectpost

Fees

Every student in a co-op program is required to pay co-op fees as established by the University. The co-op fees relate to the additional costs associated with the administration of work terms and are calculated in accordance with Ministry of Education and University of Toronto policies. However, no tuition fees are charged when registering for the work-term nor are there any additional fees associated with the required non-credit co-op work term preparation course. If a student leaves the program for any reason, co-op fees paid in earlier sessions are not refundable.
Program Requirements
Co-op programs require at least eight four-month terms of full-time study, and the satisfactory completion of two or three four-month work terms, as specified by the particular program. Work terms are evaluated by program faculty, the Co-op Office, and the employer, and a grade of CR (credit)/NCR (no credit) is recorded on the transcript. The credits earned for successful work term completion are in addition to the 20.0 credits required for the degree.

To maintain good standing in a co-op program, to be eligible for a work term, and to receive certification for its completion on graduation, a student must:

- Meet all of the normal requirements for the Honours B.A., Honours B.Sc. or B.B.A. degree;
- Follow the course of studies described for the specific program;
- Complete the non-credit co-op work term preparation course and any other prerequisites for the work term as required by the specific program;
- Maintain a cumulative grade point average (CGPA) of at least 2.50 (note that this is higher than the CGPA of 1.60 required for good standing in regular non-co-op programs);
- Receive a satisfactory evaluation for work term performance and work term reports;
- Register as a full-time student during study terms (i.e., a course load in each study term of at least 1.5 credits and normally 2.5 credits);
- Return to studies after each work term;
- Remit co-op fees as assessed by the University.

For additional information about any requirements specific to a particular program, see the program description in this Calendar.

Status in Co-op Programs
- Status in a co-op program will be determined at the end of each session (Fall, Winter, and Summer) for students who have attempted at least three full credits since beginning their studies at the University of Toronto Scarborough or in other arts and science divisions of the University.
- Students who have attempted at least three full credits and have a cumulative GPA (CGPA) of less than 2.50 but of 2.30 or more are placed on probation in the co-op program (i.e., they remain in the program subject to certain conditions). Students may clear probation by achieving a CGPA of 2.50 or better in the next study session.
- Students who have attempted at least three full credits and have a cumulative GPA (CGPA) of less than 2.30, or who have failed to clear probation within two study sessions, will be removed from the co-op program.
- Students on probation in the co-op program may not apply for a work term until they have successfully cleared their probation. However, if a student's CGPA falls below 2.50 after having secured a job placement through the placement process, the student will be permitted to complete the work term; such a student will be permitted to participate in the next recruitment process only after successfully clearing probation.
- Students who have attempted at least three full credits and have a CGPA of less than 2.30, or who have failed to clear probation within two study sessions, will be removed from the co-op program.

Introduction to Co-op Work Term Preparation Course
During their first year of enrolment in a co-op program, students will participate in a non-credit co-op work term preparation course designed to prepare them for their work term experience and to maximize the benefits that will be obtained from the associated learning opportunities. The tutorial will cover a variety of topics to help students develop the skills and tools needed to secure work placements appropriate to their program of study, and to perform professionally in the workplace. Satisfactory participation in this preparation course is required before students may go on work terms. No academic credit is given for the course and no fee is charged. For the name of the course appropriate to each program, see the relevant program description.

Work Terms
Work terms are an integral part of the co-op program curriculum. Practical work experience in an approved setting is undertaken to enhance academic studies through the opportunity to apply and develop concepts and/or skills that are important in the academic programs. Work term opportunities are arranged by the Co-op Office for the program, but must be won by students in competition with all applicants for the position. While on a work term, students remain in contact with the University, and prepare for the submission of a work-term report for evaluation by a faculty member. In addition, both the employer and the coordinator for the program will evaluate the student's performance on work terms. The work-term report must be submitted no later than the end of the second week of the study term immediately following the completion of the work term. Failure to meet this deadline will result in a grade of NCR (no credit) for the work term. A failed work term will be recorded on the transcript, and the student will be removed from the co-op program.

Work terms normally begin in September, January, or May, and students are normally eligible for a work placement after three or four academic terms of full-time study, as specified for individual programs. To be eligible for the first work term, students must be in good standing in the program (see above, under Program Requirements) and have completed any other requirements specified by the particular program. To be eligible for later work terms, students must be in good standing in the program, have completed any requirements specific to the program, and have received a grade of CR (credit) on their earlier work term(s).
Joint Programs with Centennial College

The University of Toronto Scarborough and Centennial College have established joint programs. The programs build on the academic strengths of the University of Toronto degree together with Centennial College's strengths in technical and practical education. Students earn a University of Toronto degree. Students also have the opportunity to qualify for a diploma or certificate from Centennial College, which in some cases may require one additional academic session. All Joint Programs may be taken only as part of an honours degree. For specific program details, please see the detailed program entry in the appropriate discipline and visit the Joint Programs website: www.utsc.utoronto.ca/jtprogs

- Specialist (Joint) Program in Applied Microbiology
- Specialist (Joint) Program in Environmental Science and Technology
- Specialist (Joint) Program in Journalism
- Major (Joint) Program in New Media Studies
- Specialist (Joint) Program in Paramedicine

APPLICATION PROCEDURES:
Prospective Applicants: See the Joint Programs website for details about the application procedures and the Admissions section for deadlines to apply.

Once University of Toronto is notified of the application, applicants are given information about documents required to support the application. Applicants are required to complete a Supplementary Application available at the Admissions and Student Recruitment website: www.utsc.utoronto.ca/admissions

Enrolment in joint programs is limited.

Current U of T Scarborough Students: Application procedures can be found at the Registrar’s Office website: www.utsc.utoronto.ca/subjectpost

Selection Process: The programs have enrolment limits and admission is competitive. Applicants are evaluated by both U of T Scarborough and Centennial College. Application information is shared with the relevant Program Supervisor at Centennial College. See the detailed program description for New Media Studies, Journalism and Paramedicine for other admission or post-admission requirements.

Students Enrolled in Joint Programs: Students are encouraged to meet with their U of T Scarborough Program Supervisor regularly. As these are Joint Programs, registrarial and academic information will be shared with the relevant Program Supervisor and Departments at Centennial College.

REGISTRATION PROCEDURES:
Course enrolment: Students enrol in all degree credit courses, including those taken at Centennial College (all of which are listed in this Calendar) at U of T Scarborough through ROSI.

Fees: Tuition and incidental fees are payable to the University in the normal way. In each session in which students are taking one or more courses at Centennial College, a program fee relating to the use of materials is charged. The amount of the fee varies by program.

University of Toronto Scarborough Language Citation

The Language Citation is intended to provide an incentive to students who are interested in intensive study of a particular language but who cannot or who do not necessarily wish to complete a Specialist, Major or Minor Program in the language. It is neither a substitute for a program in the language nor does it impede students wishing to complete such a program. It simply acknowledges language proficiency on the student's transcript.

The Language Citation is available to students who graduate in 2007 or in a later year. Students who graduated prior to 2007 may be eligible if they return to the U of T Scarborough for further language study that contributes to the assessment of the Citation.

Requirements for the Language Citation
The Citation may be earned in any language, modern or ancient, in which there is sufficient advanced training at the University of Toronto Scarborough.

1. Students must complete two full credits in the language beyond the introductory level and must achieve a final grade of at least B- in each of the courses that make up those two credits.
2. The two full credits may be language instruction or may be other courses (e.g. literature courses) where instruction is in the language to be assessed.

Students normally take one full credit at the introductory level. Those who already have proficiency in a language and wish to proceed directly to courses beyond the introductory level should consult the relevant program supervisor about appropriate placement.
Similarly, students who wish to include courses taken in a country where the language is spoken should consult the relevant program supervisor about appropriate study abroad options.

**Assessment of the Language Citation**

The Language Citation will be assessed at the point of graduation. To apply for a Citation, students should contact the Department of Humanities in advance of graduation, presenting the Department with a copy of their academic record (produced from ROSI through the Student Web Service) and indicating the courses they would like considered in the assessment. (For more information, contact language-coordinator@utsc.utoronto.ca or french-program-supervisor@utsc.utoronto.ca.)

The Language Citation will consist of a notation in the U of T Scarborough section of the university transcript that reads: "Completed the requirements of the Language Citation in [Name of Language]."

---

**Guide to Programs and Courses Offered**

Program (also known as Subject Post) and course descriptions are listed by discipline in the Programs and Course Descriptions section of this Calendar.

**Programs**

Some Programs have strict enrolment limits. In the event that the number of qualified applicants exceeds the teaching or other resources available, enrolment in other Programs may have to be limited at a future date.

**Notes:**
- Application procedures for current students are available at: www.utsc.utoronto.ca/subjectpost
- Tuition amounts vary with different University programs. Please consult the Student Accounts website at www.fees.utoronto.ca for further information.

The following is a list of programs currently offered by U of T Scarborough. Co-op ✓ = Co-operative option available CTEP ✓ = Eligible anchor subject in the Concurrent Teacher Education Program.

<table>
<thead>
<tr>
<th>Area</th>
<th>Department</th>
<th>Program</th>
<th>Type</th>
<th>Degree</th>
<th>Co-op</th>
<th>CTEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Studies</td>
<td>Humanities</td>
<td>African Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>Social Sciences</td>
<td>Anthropology</td>
<td>Specialist</td>
<td>BA/BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anthropology</td>
<td>Major</td>
<td>BA/BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anthropology</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Microbiology</td>
<td>Biological Sciences</td>
<td>Applied Microbiology (Joint Centennial)</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astronomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>Biological Sciences</td>
<td>Biodiversity, Ecology &amp; Evolution</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biodiversity, Ecology &amp; Evolution</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biology</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biology</td>
<td>Minor</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cell &amp; Molecular Biology</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human Biology</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human Biology</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrative Biology</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Physical &amp; Environmental Sciences</td>
<td>Biochemistry</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biological Chemistry</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemistry</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemistry</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>City Studies</td>
<td>Social Sciences</td>
<td>City Studies</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Classical Studies</td>
<td>Humanities</td>
<td>Classical Studies</td>
<td>Minor</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>Computer &amp; Mathematical Sciences</td>
<td>Computer Science</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Comprehensive stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Information Systems stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Software Engineering stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer Science</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer Science</td>
<td>Minor</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaspora &amp; Transnational Studies</td>
<td>Social Sciences</td>
<td>Diaspora &amp; Transnational Studies</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diaspora &amp; Transnational Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>Management</td>
<td>Economics for Management Studies</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economics for Management Studies</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>Department</td>
<td>Program</td>
<td>Type</td>
<td>Degree</td>
<td>Co-op</td>
<td>CTEP</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------</td>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economics for Management Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>English</td>
<td>English</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>English</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>English Literature</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Literature &amp; Film Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Science</td>
<td>Physical &amp; Environmental Sciences</td>
<td>Environmental Biology</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Chemistry</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Geoscience</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Physics</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Science</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Science &amp; Technology (Joint Centennial)</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Humanities</td>
<td>French</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>French</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>French</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>French for Francophones</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>Social Sciences</td>
<td>Human Geography</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human Geography</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical &amp; Human Geography</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Asia Studies</td>
<td>Humanities</td>
<td>Global Asia Studies</td>
<td>Specialist</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Global Asia Studies</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Global Asia Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Studies</td>
<td>Social Sciences</td>
<td>Health Studies</td>
<td>Major</td>
<td>BA/BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>Humanities</td>
<td>History</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Development Studies</td>
<td>Social Sciences</td>
<td>International Development Studies</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Development Studies</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Development Studies</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journalism</td>
<td>Humanities</td>
<td>Journalism (Joint Centennial)</td>
<td>Specialist</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linguistics</td>
<td>Humanities</td>
<td>Linguistics</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Linguistics</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Linguistics</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psycholinguistics</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Management</td>
<td>Management</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; Accounting</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; Finance</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; Human Resources</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; Information Technology</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; International Business</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management &amp; Marketing</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strategic Management</td>
<td>Specialist</td>
<td>BBA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Computer &amp; Mathematical Sciences</td>
<td>Mathematics</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teaching Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comprehensive Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Design-your-own-Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Media Studies</td>
<td>Humanities</td>
<td>Media Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>Department</td>
<td>Program</td>
<td>Type</td>
<td>Degree</td>
<td>Co-op</td>
<td>CTEP</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------------------------------------</td>
<td>---------------------------</td>
<td>--------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>Psychology</td>
<td>Neuroscience</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neuroscience</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Media Studies</td>
<td>Humanities</td>
<td>New Media Studies (Joint Centennial)</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paramedicine</td>
<td>Biological Sciences</td>
<td>Paramedicine (Joint Centennial)</td>
<td>Specialist</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td>Philosophy</td>
<td>Philosophy</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Philosophy</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Philosophy</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>Physical &amp; Environmental Sciences</td>
<td>Physical &amp; Mathematical Sciences</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical Sciences</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Physics &amp; Astrophysics</td>
<td>Physical &amp; Environmental Sciences</td>
<td>Astronomy &amp; Astrophysics</td>
<td>Minor</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physics &amp; Astrophysics</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physics &amp; Astrophysics</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Political Science</td>
<td>Social Sciences</td>
<td>Political Science</td>
<td>Specialist</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Political Science</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Political Science</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Policy</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychology</td>
<td>Mental Health Studies</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mental Health Studies</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psychology</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psychology</td>
<td>Major</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psychology</td>
<td>Minor</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td>Humanities</td>
<td>Religion</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>Social Sciences</td>
<td>Sociology</td>
<td>Specialist</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sociology</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sociology</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>Computer &amp; Mathematical Sciences</td>
<td>Quantitative Analysis</td>
<td>Specialist</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics</td>
<td>Major</td>
<td>BSc</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics</td>
<td>Minor</td>
<td>BSc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual &amp; Performing Arts</td>
<td>Humanities</td>
<td>Art &amp; Culture</td>
<td>Specialist</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Studio Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Art History</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Art History</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arts Management</td>
<td>Specialist</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Music &amp; Culture</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Music &amp; Culture</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Studio</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Studio</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Theatre &amp; Performance Studies</td>
<td>Major</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Theatre &amp; Performance Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women’s &amp; Gender Studies</td>
<td>Humanities</td>
<td>Women’s &amp; Gender Studies</td>
<td>Major</td>
<td>BA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women’s &amp; Gender Studies</td>
<td>Minor</td>
<td>BA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Courses

Suspension of enrolment
Enrolment in the following programs has been suspended indefinitely while reviews are conducted. Students who first enrolled at UTSC as a degree student prior to the:

2010 Summer Session should refer to the 2009/2010 UTSC Calendar for program requirements.
- The science version of the Major Program in International Development Studies
- The Interfaculty Combination Program in International Development & Environmental Studies
- The Major Program in International Studies
- The Major Program in Media Studies
- The Major Program in Religion

2011 Summer Session should refer to the 2010/2011 UTSC Calendar for program requirements
- The Specialist Program in Arts & Culture all streams except Studio

2012 Summer Session should refer to the 2011/2012 UTSC Calendar for program requirements.
- The Major Program in Intersections, Exchanges, Encounters in the Humanities

Courses
See also the "Course Selection" section of this Calendar and "How to Read a Course Description" below.

Exclusions, Prerequisites and Corequisites

1. Exclusions
   Students may not register for credit in a course which lists as an exclusion a course they are currently taking or have already passed. (This includes credit awarded for work at other institutions.) Courses are not always mutually exclusive, so it is important to check the entries for both courses when one lists the other as an exclusion. Where students enrol in an excluded course, the second course will be marked as an extra course (see "Standing in a Course" in the Registration section of this Calendar) and, although it will appear on the transcript, it will not count towards the degree.

   Notes:
   a) Students should be aware that ROSI does not automatically check for exclusions. Although courses will be identified as extra courses as soon as the exclusion is discovered, this could happen without warning at any time during the student’s studies at U of T Scarborough.
   b) Although they may not appear in this Calendar, some Faculty of Arts & Science or U of T Mississauga courses may be exclusions of U of T Scarborough courses and vice versa. Similarly, some U of T Scarborough courses, particularly ones that are no longer in the curriculum, may not appear in this Calendar as exclusions. If U of T Scarborough, U of T Mississauga and Faculty of Arts & Science courses have similar titles or content, contact the Departmental Office offering the course(s) to determine if the course(s) content is so similar that the courses should be considered as exclusions. It is always good practice to consult an academic advisor or program supervisor before taking courses on other campuses.

2. Prerequisites
   Students must have passed the prerequisite course before enrolling in the course being described. Instructors are permitted to waive prerequisites if they feel that there are adequate grounds for so doing. The Registrar's Office does NOT require notification of a prerequisite waiver. However, when the course being waived is listed as a program requirement, students should discuss the matter in advance with their program supervisor - a program exception form may be necessary. If a student registers in a course without meeting its prerequisite, the student may be withdrawn from the course at any time without warning. Students who are not withdrawn from the course remain in it at their own risk; lack of the prerequisite is not grounds for special consideration. Students who complete courses for which they have obtained a waiver of specific prerequisites may not subsequently obtain credit for the less-advanced prerequisite courses. Students may not register for credit in a course that is a specific prerequisite for a course they have already passed. In these instances, the course will be counted as "extra" (see the section of this Calendar on extra courses).

3. Corequisites
   Students must either already have passed the corequisite course, or must enrol in it at the same time as they take the course being described. Instructors are permitted to waive corequisites if they feel that there are adequate grounds for so doing. If students register in a course without meeting its corequisite, or if they withdraw from the co-required course without obtaining a specific waiver of the corequisite, they may be withdrawn from the course at any time. Students who are not withdrawn from the course remain in it at their own risk; lack of the corequisite is not grounds for special consideration.

4. Prerequisites in Square Brackets
   Square Brackets are used in prerequisites to indicate aggregate or alternate choices example: [ECMB01H3 or ECMB02H3] & [ECMB05H3 or ECMB06H3]

5. Recommended
   In addition to prerequisites and corequisites, other background material or courses that enhance a student's understanding of a course may be listed in the course description as "Recommended".
6. Exclusions, Prerequisites and Corequisites in Parentheses
Some exclusions and some prerequisite and corequisite courses are enclosed in parentheses, for example (MGTC03H3). This indicates that the course is no longer in the curriculum. Students who have already passed an excluded course contained in parentheses may not take the course being described. Students who have completed, in a previous session, a prerequisite or corequisite course contained in parentheses may make use of the course to meet the requirements of the course being described.

Supervised Reading, Supervised Research and Independent Study Courses
Students in these courses work under the direction of a faculty member with whom they meet periodically or in whose laboratory they work. Students must obtain written permission of instructors before enrolling in them. (Forms are available from the Registrar's Office.) Please note that some disciplines require submission of their own special application forms for courses of this type in addition to the Supervised Study form.

WebOption Courses
Some U of T Scarborough courses have webOption sections intended to provide enhanced flexibility with respect to how and when students attend lectures. These sections are normally created by taping instructors as they give their traditional lectures, then posting these taped lectures, along with any slides shown in class, on the internet for students to watch online. Thus, students can make these classes fit their lives and their schedules.

Credit/No Credit
Effective with the 2010 Summer Session, UTSC degree students may select up to 1.0 full credit of their degree credits to be assessed on a Credit/ No Credit basis. Students must choose this mode of assessment no later than the last day to enrol in the relevant course. Requests for this type of assessment are submitted to the Registrar's Office via eService. Once the deadline has passed, students may not, under any circumstances, reverse this decision. To achieve a status of CR (Credit), a student must achieve a final mark of at least 60%. Marks below that will be assessed as NCR (No Credit). Courses with a final status of CR will count as degree credits but will have no effect on the student's GPA. They may count as Breadth Requirements and degree credits, but cannot be used to satisfy program requirements.

Courses with a final status of NCR will not count as degree credits but will not count as failures, and will also not be included in the GPA calculation.

Students may exercise this option to a total of 1.0 full credit within the total number of credits required for a degree. Note: This option is available only for UTSC courses. The choice is not restricted as to year or level of course. This option is not available to UTSC non-degree students or to students from other faculties/divisions of the University of Toronto.

Pass/Fail
Certain courses, including some visual and performing arts courses, are graded on a Pass/Fail (P/F) basis. In these courses to achieve a status of P (Pass), a student must achieve a final mark of at least 50%. Where students earn a grade of “Pass” in a P/F course, the course is not included in the grade point average; where students earn a grade of “Fail”, the course is included as an “F” (value zero) in the grade point average.

In courses graded on a Pass/Fail basis (P/F), students may opt for a normal graded assessment with specific grades assigned. Students must choose this mode of assessment no later than the last day to enrol in the relevant course. Requests for this type of assessment are made through the course instructor offering the course. Once the deadline has passed, students may not, under any circumstances, reverse this decision.
How to Read a Course Description

**MGTD75H3**

*Investments*

This course deals with fundamental elements of investments. Basic concepts and techniques are introduced for various topics such as risk and return characteristics, optimal portfolio constructions, security analysis, investments in stocks, bonds and derivative securities, and portfolio performance measurements.

**Prerequisite:** MGTB09H3 or (MGTC03H3)

**Corequisite:** MGTC09H3

**Exclusion:** MGT330H, RSM330H

**Enrolment Limits:** 60

**Breadth Requirement:** Social & Behavioural Sciences

**Section Code:**

Section code indicates the duration of the course. This information is not contained in the course code, but is provided in the course timetable. Note: Not all courses listed in this Calendar are offered each session (see the course timetable at www.utsc.utoronto.ca/timetable)
African Studies

Faculty List

N. Kortenaar, M.A., Ph.D. (Toronto), Professor
J. Ndaryiragije, M.A. (Montreal-UQAM), Ph.D. (Montreal-UQAM), Associate Professor
S.J. Rockel, M.A., Ph.D. (Toronto), Associate Professor
T. Kepe, B.Agric. (Fort Hare Univ. South Africa), M.Sc. (Guelph), Ph.D. (Univ. Western Cape, South Africa), Associate Professor
A. Hachimi, B.A. (Moulay Ismail), M.A. (Hawaii), Ph.D. (Hawaii), Assistant Professor
M. Assif, B.A. (Hassan II), M.A., Ph.D. (Case Western Reserve), Lecturer

Program Director: S. Rockel (416-287-7145) Email: rockel@utsc.utoronto.ca

African Studies aims to widen students’ knowledge and experience from different perspectives in relation to the second largest and, in some respects, most complex continent, its peoples and their diasporas. It encourages students to engage with and explore ideas and material concerning African histories, cultures, economies, political systems, artistic expression, and systems of belief. In many program courses Africa, its peoples and their cultures are situated in relation to the wider world. The study of interconnections over long periods of time with Europe, Asia, and the Americas highlights Africa’s central role in world history and in processes of globalization. Throughout the program, students explore the exciting recent developments in our understanding of African civilizations, thought, political and religious systems, as well as histories of slavery, colonialism, racism, and nationalism. A number of courses emphasize modern African, Caribbean, and African-American cultural and artistic responses to modernity, racism, and liberation, as well as struggles for security and development. The program as a whole challenges students to think in new innovative directions about Africa across the disciplines, and to reject preconceived myths and stereotypes that permeate mainstream and popular cultures in the West. Students with an African Studies minor will gain strong skills in critical analysis, research, writing, and communications. The program aims to go further to encourage an awareness of the relationships between the production and application of knowledge and the wider forces of global change, as well as a love of intellectual challenges.

Students who intend to complete the African Studies program should include AFSA01H3 in their first year course selection. Certain elective courses (e.g. ENGD08H3, ENGC73H3, (ENGD63H3)) have non-African Studies prerequisites. This may require that you take more than 4.0 credits to complete the program. If you are interested in taking one of them, check the prerequisites carefully before deciding what courses to select.
The African Studies Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_af.html

MINOR PROGRAM IN AFRICAN STUDIES (ARTS)
Undergraduate Advisor: 416-287-7184 Email: afs-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete four full credits, as follows:

1. AFSA01H3 Africa in the World: An Introduction
   AFSB01H3 African Worldviews
2. 1.0 credit from the following (students should check course descriptions for prerequisites):
   AFSA03H3 Experiencing Development in Africa
   ANTB05H3 Culture and Society in Africa
   HISB50H3 Africa in the Nineteenth Century
   HISB51H3 Twentieth Century Africa
   AFSC30H3 Language and Society in the Arab World
3. 2.0 credits from the list below; at least 1.0 credit must be at the C- or D-level (students should check course description for prerequisites):
   AFSC30H3 Language and Society in the Arab World (if not used in Requirement 2)
   ANTB05H3 Culture and Society in Africa (if not used in Requirement 2)
   (ANTC06H3) African Cultures and Societies II: Case Studies
   CLAC05H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
   ENGB17H3 Contemporary Literature from the Caribbean
   ENGC51H3 Contemporary Arab Women Writers
   ENGC72H3 Contemporary Literature from Africa
   ENGC73H3 Rap Poetics (formerly ENGD63H3)
   ENGD08H3 Topics in African Literature
   (ENGD61H3) James Baldwin, the African American Experience, and the Liberal Imagination
   FREA01H3 Language Practice I
   FREA02H3 Language Practice II
   FREB01H3 Language Practice III
   FREB02H3 Language Practice IV
   FREB35H3 Francophone Literature
   FREC47H3 Special Topics in Linguistics: Pidgin and Creole Languages
FRED12H3 Advanced Topics in Literature: Haitian Migrant Literature in Quebec
GGRB28H3 Geographies of Disease
GGRC25H3 Land Reform and Development
HISB50H3 Africa in the Nineteenth Century (if not used in Requirement 2)
HISB51H3 Twentieth Century Africa (if not used in Requirement 2)
HISC52H3 A History of Ethiopia
HISC55H3 War and Society in Modern Africa
HISD50H3 Southern Africa, 1652-1910
HISD51H3 Southern Africa: Colonial Rule, Apartheid and Liberation
HISD52H3 East African Societies in Translation
LGGA40H3 Introductory Modern Standard Arabic I
LGGA41H3 Introductory Modern Standard Arabic II
LGGB42H3 Intermediate Modern Standard Arabic I
LGGB43H3 Intermediate Modern Standard Arabic II
LGGB45H3 Modern Standard Arabic I for Students with Prior Background
POLA90H3 Politics, Corruption, and Violence
VPHB50H3 Africa through the Photographic Lens
VPHB65H3 Exhibiting Africa: Spectacle and the Politics of Representation
WSTC13H3 Women, Gender and Islam

Note: Not all courses in Requirement #2 and #3 are offered every year.

AFSA01H3 Africa in the World: An Introduction
An interdisciplinary introduction to the history and development of African Studies with Africa's place in the wider world a key theme. Students critically engage with African and diasporic histories, cultures, social structures, economies, and belief systems. Course material is drawn from Archaeology, History, Anthropology, Geography, Literatures, the Arts and Women's Studies.
Exclusion: NEW150Y
Breadth Requirement: History, Philosophy & Cultural Studies

AFSA03H3 Experiencing Development in Africa
This experiential learning course allows students to experience first-hand the realities, challenges, and opportunities of working with developmental organizations in Africa. The goal is to allow students to actively engage in research, decision-making, problem solving, partnership building, and fundraising, processes that are the key elements of development work.
Same as IDSA02H3
Prerequisite: AFSA01H3 and IDSA01H3
Exclusions: IDSA02H3
Enrolment Limit: 25
Breadth Requirement: Social and Behavioural Sciences

AFSB01H3 African Worldviews
An interdisciplinary introduction to Africa and African diasporic religions, philosophies, and oral and written cultures.
Exclusion: (AFSA02H3)
Recommended Preparation: AFSA01H3
Breadth Requirement: History, Philosophy & Cultural Studies

AFSC30H3 Language and Society in the Arab World
An examination of the relationship between language, society, and identity in the Arab world, with special emphasis on North Africa. Topics include: colonial and postcolonial periods; the role of Arabic in pan-Arab identity; multilingualism; class and education; ideologies of gender and language; and ethno-linguistic revitalization among Berbers in North Africa.
Prerequisite: Any B-level course in African Studies, Linguistics, History, or Women’s and Gender Studies
Enrolment Limit: 50
Breadth Requirement: Arts, Literature & Language

Anthropology

Faculty List
F. D. Burton, B.Sc., M.A. (NYU), Ph.D. (CUNY), Professor Emerita
M. Latta, B.A. (Kansas), M.A., Ph.D. (Toronto), Associate Professor Emerita
M. Lambek, B.A. (McGill), M.A., Ph.D. (Michigan), F.R.S.C., Professor
M. Latta, B.A. (Kansas), M.A., Ph.D. (Toronto), Associate Professor Emerita
S. Bamford, B.A. (Toronto), M.A. (McMaster), M.A., Ph.D. (Virginia), Associate Professor
G. Gillison, B.A. (McGill), Ph.D. (CUNY), Associate Professor
L. Sawchuk, B.A., M.A. (Manitoba), Ph.D. (Toronto), Associate Professor
M. Schillaci, B.A. (New Mexico), M.A. (Toronto), Ph.D. (New Mexico), Associate Professor
M. Cummings, B.A. (York), M.A. (Dalhousie), Ph.D. (York), Assistant Professor
G. Daswani, B.Sc. (National University of Singapore), M.Sc., Ph.D. (London School of Economics), Assistant Professor
G. Dewar, B.Sc., M.A. (Toronto), Ph.D. (Cape Town), Assistant Professor
C. Krupa, B.A., M.A. (Toronto), Ph.D. (California, Davis), Assistant Professor
Anthropology is the study of humankind, dealing with the origin, development and nature of humans and their culture. As such, it is concerned with human phenomena in the widest possible terms, both biological and cultural. It differs from other social sciences in its comparative and historical approach, and in its intimate links with both the natural sciences and the humanities. Anthropology examines societies today and in the past, both complex civilizations, global and transnational interconnections, and relatively small-scale, non-literate societies.

From this vantage point, Anthropology attempts to understand the common factors underlying human existence and the factors that produce social change and differences between people and cultures.

Because of its vast subject matter, Anthropology is traditionally divided into four subject fields: Socio-cultural Anthropology, Evolutionary Anthropology, Anthropological Linguistics, and Archaeology. At the present time, University of Toronto Scarborough offers courses within two major streams: Socio-cultural and Evolutionary. Some Linguistic Anthropology courses are also offered and are closely linked to the Socio-cultural stream.

Students intending to complete a program in Anthropology must take ANTA01H3 and ANTA02H3 within their first year in order to prepare them for more advanced courses. Students normally elect whether to pursue the Socio-cultural stream (which leads to a B.A. degree) or the Biological Anthropology stream (which leads to a B.Sc. degree) during their second year of study but are encouraged to take courses in both streams. All courses in Evolutionary Anthropology carry a science credit.

SPECIALIST (COOPERATIVE) PROGRAM IN ANTHROPOLOGY (ARTS/SCIENCE)

The Specialist (Cooperative) Program in Anthropology has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it. Degree students who first enrolled at UTSC prior to the 2011 Summer Session should refer to the 2010/2011 UTSC Calendar.

SPECIALIST PROGRAM IN ANTHROPOLOGY (ARTS/SCIENCE)

The Specialist Program in Anthropology is intended to provide the professionally oriented student with background preparation of sufficient breadth and depth to pursue specialized training at the graduate level. It is also designed to offer interested students a course structure as background for a wide range of occupations and professions. Students are encouraged to consult with the Supervisor of Studies regarding the selection of a course sequence appropriate to their interests and objectives. In exceptional circumstances, supervised research and reading courses are available at the C- and D-levels (ANTC03H3, ANTC04H3, ANTD31H3, ANTD32H3).

These courses require special arrangements prior to registration. Read the descriptions for these courses carefully as restrictions apply.

Program Requirements

The Program requires completion of 12.0 full credits, as indicated below.

1. ANTA01H3 Introduction to Anthropology: Becoming Human
   ANTA02H3 Introduction to Anthropology: Society, Culture and Language
2. At least 1.0 credits from among the following:
   ANTB14H3 Biological Anthropology: Beginnings
   ANTB15H3 Contemporary Human Evolution and Variation
   ANTB19H3 Ethnography and the Comparative Study of Human Societies
   ANTB20H3 Culture, Politics and Globalization

   Students intending to specialize in Evolutionary Anthropology must take ANTB14H3 and ANTB15H3. Students intending to specialize in Socio-cultural Anthropology must take ANTB19H3 and ANTB20H3. These are prerequisites for upper level courses.

3. 10.0 credits at the B-level or above, of which 5.0 credits should be at the C- or D-level, including at least 1.0 credit at the D-level.

   Note: Students pursuing the Socio-Cultural stream must ensure that as part of Requirement 3, they complete:
   At least 1.0 credit in area studies courses ANTB05H3, ANTB16H3, ANTB18H3, ANTB65H3, ANTC89H3
   a. ANTD07H3
   b. At least 0.5 credit in Ethnographic methods: ANTC60H3 or ANTD05H3
   c. At least 1.0 credit from among ANTD05H3, ANTD06H3, ANTD15H3, ANTD24H3
   d. Courses in Anthropological Linguistics (i.e. LINC27H3 & IEEC11H3) may be counted towards fulfilling Requirement 3.

   Note: For a B.Sc. at least 7.5 of the credits required for the program must be science credits.
MAJOR PROGRAM IN ANTHROPOLOGY (ARTS/SCIENCE)
The major program in Anthropology provides a course structure for those students desiring to expand upon or supplement other areas of academic interest by taking advantage of Anthropology's unique global, chronological, and biological perspective on the human condition.

Program Requirements
The Program requires completion of 8.0 full credits in Anthropology including:

1. ANTA01H3 Introduction to Anthropology: Becoming Human
   ANTA02H3 Introduction to Anthropology: Society, Culture and Language
2. At least 1.0 credits from among the following:
   ANTB14H3 Biological Anthropology: Beginnings
   ANTB15H3 Contemporary Human Evolution and Variation
   ANTB19H3 Ethnography and the Comparative Study of Human Societies
   ANTB20H3 Culture, Politics and Globalization

   Students intending to specialize in Biological Anthropology must take ANTB14H3 and ANTB15H3. Students intending to specialize in Cultural Anthropology must take ANTB19H3 and ANTB20H3. These are prerequisites for upper level courses.

3. 6.0 credits at the B-level or above, of which at least 3.0 credits must be at the C- or D-level.
   Note: Students pursuing the Socio-Cultural stream must ensure that as part of Requirement 3, they complete:
   a. At least 1 credit in area studies courses ANTB05H3, ANTB16H3, ANTB18H3, ANTB65H3, ANTC89H3, ANTD07H3
   b. ANTC60H3
   c. At least 0.5 credit from among: ANTD05H3, ANTD06H3, ANTD15H3, ANTD24H3
   d. Courses in Anthropological Linguistics (i.e. LINC27H3 & IEEC11H3) may be counted towards fulfilling Requirement 3.

Note: For a B.Sc., at least 5.5 of the credits required for the program must be science credits.

MINOR PROGRAM IN ANTHROPOLOGY (ARTS)
The Minor Program in Anthropology provides a course structure for students majoring or specializing in other disciplines who want some directed exposure to anthropological thought.

Program Requirements
The Program requires completion of 4.0 full credits as follows:

1. ANTA01H3 Introduction to Anthropology: Becoming Human
   ANTA02H3 Introduction to Anthropology: Society, Culture and Language
2. At least 1.0 credits from among the following:
   ANTB14H3 Biological Anthropology: Beginnings
   ANTB15H3 Contemporary Human Evolution and Variation
   ANTB19H3 Ethnography and the Comparative Study of Human Societies
   ANTB20H3 Culture, Politics and Globalization
3. 2.0 additional credits in Anthropology, of which 1.0 credit must be at the C- or D-level.

SPECIALIST PROGRAM IN MEDICAL ANTHROPOLOGY (ARTS/SCIENCE)
The Specialist Program in Medical Anthropology has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it.

ANTA01H3 Introduction to Anthropology: Becoming Human
An introduction to Biological Anthropology and Archaeology. Concentrates on the origins and evolution of human life, including both biological and cultural aspects, from the ancient past to the present. Science credit
Exclusion: ANT100Y, ANT101H
Breadth Requirement: Natural Sciences

ANTA02H3 Introduction to Anthropology: Society, Culture and Language
How does an anthropological perspective enable us to understand cultural difference in an interconnected world? In this course, students will learn about the key concepts of culture, society, and language. Drawing upon illustrations of family, economic, political, and religious systems from a variety of the world’s cultures, this course will introduce students to the anthropological approach to studying and understanding human ways of life.
Exclusion: ANT100Y, ANT102H
Breadth Requirement: Social & Behavioural Sciences

ANTB01H3 Political Ecology
This course examines human-environmental relations from an anthropological perspective. Throughout the semester, we explore how peoples from different parts of the globe situate themselves within culturally constructed landscapes. Topics covered include ethnoculture, conservation, green consumerism, the concept of 'wilderness', and what happens when competing and differentially empowered views of the non-human world collide.
Prerequisite: ANTA02H3
Breadth Requirement: Social & Behavioural Sciences
ANTB05H3 Culture and Society in Africa
An overview of the range and diversity of African social institutions, religious beliefs and ritual, kinship, political and economic organization, pre-colonial, colonial and post-colonial experience.
Area course Prerequisite: ANTA02H3
Breadth Requirement: Social & Behavioural Sciences

ANTB09H3 Culture through Film and Media
How is culture represented through visual media, from ethnographic and documentary film, to feature films, television, and new media? How do various communities re- vision themselves through mass, independent, or new media? This course investigates media and its role in the contemporary world from a socio-cultural anthropological perspective.
Prerequisite: ANTA02H3
Enrolment Limits: 120
Breadth Requirement: Social & Behavioural Sciences

ANTB14H3 Biological Anthropology: Beginnings
This course surveys humanity’s origin. The synthetic theory of evolution, its principles, processes, evidence and application underlie this course. Lecture topics and laboratory projects include: evolutionary theory, human variation, human adaptability, primate biology, and behaviour, taxonomy and classification, palaeontological principles and human origins. Science credit
Prerequisite: ANTA01H3
Exclusion: ANT203Y
Breadth Requirement: Natural Sciences

ANTB15H3 Contemporary Human Evolution and Variation
Basic to the course is an understanding of the synthetic theory of evolution and the principles, processes, evidence and application of the theory. Laboratory projects acquaint the student with the methods and materials utilized in Biological Anthropology. Specific topics include: the development of evolutionary theory, the biological basis for human variation, the evolutionary forces, human adaptability and health and disease. Science credit
Prerequisite: [ANTA01H3 & ANTA02H3]
Exclusion: ANT203Y
Breadth Requirement: Natural Sciences

ANTB16H3 Canadian Cultural Identities
This course explores the creation or invention of a Canadian national identity in literature, myth and symbolism, mass media, and political culture. Ethnographic accounts that consider First Nations, regional, and immigrant identities are used to complicate the dominant story of national unity.
Area course
Prerequisite: ANTA02H3
Breadth Requirement: Social & Behavioural Sciences

ANTB18H3 Development, Inequality and Social Change in Latin America
This course addresses Latin American systems of inequality in relation to national and transnational political economy, from colonialism to neoliberalism; how ideas of race, culture, and nation intersect with development thinking and modernization agendas; and how the poor and marginalized have accommodated, resisted, and transformed cultural and political domination.

ANTB19H3 Ethnography and the Comparative Study of Human Societies
This course introduces students to the theory and practice of ethnography, the intensive study of people’s lives as shaped by social relations, cultural beliefs, and historical forces. Various topics, including religion, economics, politics, and kinship introduce students to key anthropological concepts and theoretical developments in the field.
Prerequisite: ANTA02H3
Exclusion: ANT204Y
Breadth Requirement: Social & Behavioural Sciences

ANTB20H3 Culture, Politics and Globalization
This course is a further examination of approaches to the study of human cultural diversity in an interconnected world. Through ethnographic accounts and documentary films, students examine the affects of globalization through the political dimensions of culture and the global flows of technology, religion, kinship networks, migration, capital and crime.
Prerequisite: ANTA02H3
Exclusion: ANT204Y, ANT204H
Breadth Requirement: Social & Behavioural Sciences

ANTB21H3 Introduction to Linguistics Anthropology
How are language and culture connected? How does language work, in ritual, kinship, religion, myth, in media, and everyday life, and how does language affect thought? These questions are introduced with a variety of ethnographic examples.
Prerequisite: ANTA02H3
Breadth Requirement: Arts, Literature & Language

ANTB22H3 Primate Behaviour
This course will provide students with a general introduction to the behaviour and ecology of non-human primates (prosimians, Old and New World monkeys, and apes), with a particular emphasis on social behaviour. The course will consist of lectures reinforced by course readings; topics covered will include dominance, affiliation, social and mating systems, communication, and reproduction. Science credit
Prerequisite: ANTA01H3
Exclusion: (ANTB22Y3)
Breadth Requirement: Social & Behavioural Sciences

ANTB64H3 The Anthropology of Food: Consuming Passions
This course examines the social significance of food and foodways from the perspective of cultural anthropology. We explore the beliefs and behaviours surrounding the production, distribution and consumption of food, and the role of food in shaping or revealing cultural relations, identities, political processes, and form of globalization.
Prerequisite: ANTA02H3
Exclusion: (ANTC64H3)
Enrolment Limits: 150
Breadth Requirement: Social & Behavioural Sciences
ANTB65H3  An Introduction to Pacific Island Societies
Introduces the cultures and peoples of the Pacific. Examines the ethnography of the region, and the unique contributions that Pacific scholarship has made to the development of anthropological theory. Explores how practices of exchange, ritual, notions of gender, death and images of the body serve as the basis of social organization. 
Area course
Prerequisite: ANTA02H3
Exclusion: (ANTC65H3)
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

ANTC03H3
ANTC04H3  Directed Reading in Anthropology
A directed exploration of specific topics in Anthropology, based on extensive investigation of the literature. These courses are available in exceptional circumstances and do not duplicate regular course offerings. Students are advised that they must obtain consent from the supervising instructor before registering. Individual tutorials, as arranged. A minimum B plus average is normally required to be considered for these courses. May be science credit or area course depending on topic.
Prerequisite: Permission of the Instructor & ANTA01H3 & ANTA02H3 & one B-level full credit in Anthropology in the appropriate sub-field (biological or cultural).

ANTC07H3  Material Worlds
This course explores the intersection of the social and the material by examining the role of objects in making worlds. We examine the relationship between people, culture, and 'things' through topics such as commodification and consumption, collecting and representation, technology and innovation, art and artifact, and the social life of things.
Prerequisite: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC09H3  Families: Kinship and Marriage from a Cross-Cultural Perspective
This course explores Anthropological approaches to kinship and family arrangements. In addition to examining the range of forms that family arrangements can take cross-culturally, we also examine how kinship configurations have changed within our own society in recent years. Topics to be covered include trans-national adoption, "mail-order-brides", new reproductive technologies and internet dating.
Prerequisite: ANTA02H3, ANTB19H3 & ANTB20H3
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

ANTC10H3  Anthropological Perspectives on Development
A critical probe of the origins, concepts, and practices of regional and international development in cultural perspective. Attention is paid to how forces of global capitalism intersect with local systems of knowledge and practice.
Prerequisite: [ANTB19H3 & ANTB20H3]
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

ANTC11H3  Culture, Science and Biotechnology: Redefining the 'Natural' Order of Things
This course examines how recent developments in biotechnology - cloning, the manufacture of genetically modified organisms, assisted reproduction technologies, and the mapping of the human genome, to name a few - are transforming our understanding of what it means to be human, including the relationship between human beings and other species.
Prerequisite: ANTC09H3
Exclusion: (ANTC05H3)
Enrolment Limits: 70
Breadth Requirement: Social & Behavioural Sciences

ANTC14H3  Feminism and Anthropology
Examines why, when, and how gender inequality became an anthropological concern by tracing the development of feminist thought in a comparative ethnographic framework.
Prerequisite: [ANTB19H3 & ANTB20H3]
Breadth Requirement: Social & Behavioural Sciences

ANTC15H3  Genders and Sexualities
Complements and extends ANTC14H3 by exploring cultural constructions of male and female in a range of societies and institutions.
Prerequisite: [ANTB19H3 & ANTB20H3]
Recommended Preparation: ANTC14H3
Breadth Requirement: Social & Behavioural Sciences

ANTC16H3  The Foundation and Theory of Human Origins
The study of human origins in light of recent approaches surrounding human evolution. This course will examine some of these, particularly the process of speciation, with specific reference to the emergence of Homo. Fossils will be examined, but the emphasis will be on the interpretations of the process of hominisation through the thoughts and writings of major workers in the field.
Science credit
Prerequisite: ANTA01H3 or ANTB14H3 or ANTC17H3
Exclusion: (ANTC32Y)
Breadth Requirement: Natural Sciences

ANTC17H3  Human Origins: New Discoveries
The study of human origins in light of recent approaches surrounding human evolution. New fossil finds present new approaches and theory. This course will examine some of these, particularly the process of speciation and hominisation with specific reference to the emergence of Homo. Labs permit contact with fossils in casts. Science credit
Prerequisite: [ANTA01H3 & ANTA02H3]
Exclusion: (ANTC332Y)
Breadth Requirement: Natural Sciences

ANTC18H3  Urban Anthropology
Urban spaces, neighbourhoods, and institutions have at different times been the focus of ethnographic studies of cities. In this course we will examine the role of culture, cultural diversity, space and performance in urban institutions.
Prerequisite: ANTB19H3 & ANTB20H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
ANTC19H3 Producing People and Things: Economics and Social Life

This course examines economic arrangements from an anthropological perspective. A key insight to be examined concerns the idea that by engaging in specific acts of production, people produce themselves as particular kinds of human beings. Topics covered include gifts and commodities, consumption, global capitalism and the importance of objects as cultural mediators in colonial and post-colonial encounters. Prerequisite: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC20H3 Gifts, Money and Morality

What limits exist or can be set to commoditized relations? To what extent can money be transformed into virtue, private goods into the public "Good"? We examine the anthropological literature on gift-giving, systems of exchange and value, and sacrifice. Students may conduct a short ethnographic project on money in our own society, an object at once obvious and mysterious. Prerequisite: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC23H3 Primate Sexuality

This course will review primate socio-sexual behaviour from an evolutionary perspective. Following a broad survey of mating patterns in the primate order, specific topics will be discussed, including male and female mating strategies, mate choice and sperm competition. Taxonomic groups of focus will include prosimians, monkeys, apes and humans. Science credit Prerequisite: ANTB22H3
Breadth Requirement: Natural Sciences

ANTC25H3 Anthropology and Psychology

How are we to understand the relationship between psychological universals and diverse cultural and social forms in the constitution of human experience? Anthropology's dialogue with Freud; cultural construction and expression of emotions, personhood, and self. Prerequisite: ANTA02H3
Recommended Preparation: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC31H3 Ritual and Religious Action

The nature and logic of ritual. Religious practices and projects; the interface of religion, power, morality, and history in the contemporary world. Prerequisite: [ANTB19H3 & ANTB20H3]
Breadth Requirement: Social & Behavioural Sciences

ANTC32H3 Political Anthropology

Can ethnographic research help us make sense of various political situations and conflicts around the world? In this course we will review different approaches to power and politics in classical and current anthropology. We will consider notions of the state, political agency and power, civil society, authoritarianism and democracy. Prerequisite: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC33H3 Conceptualizing Religion

Anthropological approaches to the origin and function of religion, and the nature of symbolism, myth, ritual, sorcery, spirit possession, and cosmology, with primary reference to the religious worlds of small-scale societies. Prerequisite: ANTB19H3 & ANTB20H3
Exclusion: (ANTB30H3)
Breadth Requirement: Social & Behavioural Sciences

ANTC34H3 The Anthropology of Transnationalism

This course considers dimensions of transnationalism as a mode of human sociality and site for cultural production. Topics covered include transnational labour migration and labour circuits, return migration, the transnational dissemination of electronic imagery, the emergence of transnational consumer publics, and the transnational movements of refugees, kinship networks, informal traders and religions. Prerequisite: ANTB19H3 & ANTB20H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

ANTC35H3 Quantitative Methods in Anthropology

A consideration of quantitative data and analytical goals, especially in archaeology and biological anthropology. Some elementary computer programming, and a review of programs and packages suitable for anthropological analyses will be included. Science credit Prerequisite: ANTA01H3 & ANTA02H3.
Exclusion: ECMB11H3, PSYB07H3, SOCB06H3, STAB22H3
Recommended Preparation: ANTB15H3
Breadth Requirement: Quantitative Reasoning

ANTC40H3 Methods and Analysis in Anthropological Demography

An examination of the biological, demographic, ecological and socio-cultural determinants of human and non-human population structure and the interrelationships among them. Emphasis is given to constructing various demographic measures of mortality, fertility and immigration and their interpretation. Science credit Prerequisite: (ANTC39H3)
Breadth Requirement: Quantitative Reasoning

ANTC41H3 Environmental Stress, Culture and Human Adaptability

Human adaptability refers to the human capacity to cope with a wide range of environmental conditions, including aspects of the physical environment like climate (extreme cold and heat), high altitude, geology, as well as aspects of the socio-cultural milieu, such as pathogens (disease), nutrition and malnutrition, migration, technology, and social change. Science credit Prerequisite: [ANTB14H3 & ANTB15H3] or [BIOA01H3 & BIOA02H3]
Breadth Requirement: Natural Sciences

ANTC42H3 Human Growth, Development and Adaptability

Human adaptability refers to the human capacity to cope with a wide range of environmental conditions. Emphasis is placed on human growth and development in stressed and non-stressed environments. Case studies are used extensively.
ANTC47H3 Human and Primate Comparative Osteology
A "hands-on" Laboratory course which introduces students to analyzing human and nonhuman primate skeletal remains using a comparative framework. The course will cover the gross anatomy of the skeleton and dentition, as well as the composition and microstructure of bone and teeth. The evolutionary history and processes associated with observed differences in human and primate anatomy will be discussed.
Science credit
Prerequisite: ANTB19H3 & ANTB20H3 & at least 0.5 credit at the C-level in socio-cultural anthropology
Enrolment Limits: 40
Breadth Requirement: Natural Sciences

ANTC48H3 Advanced Topics In Human Osteology
A "hands-on" laboratory course which introduces students to the methods of analyzing human skeletal remains. Topics and analytic methods include: (1) the recovery and treatment of skeletal remains from archaeological sites; (2) odontological description, including dental pathology; (3) osteometric description; (4) nonmetric trait description; (5) methods of estimating age at death and sex; (6) quantitative analysis of metric and nonmetric data; and (7) paleopathology.
Science credit
Prerequisite: ANTC47H3
Exclusion: ANT334H, ANT334Y
Enrolment Limits: 40
Breadth Requirement: Natural Sciences

ANTC60H3 Fieldwork in Social and Cultural Anthropology
An investigation of how social-cultural anthropologists collect data and conduct fieldwork. Students complement reading and lectures on method with gaining first-hand experience in carrying out various techniques of anthropological research including interviewing, collecting life histories, participant observation, and project design. We also consider what it means to carry out ethically responsible research.
Prerequisite: ANTB19H3 & ANTB20H3 & at least 0.5 credit at the C-level in socio-cultural anthropology
Enrolment Limits: 40 with preference given to students in Specialists, then majors in Anthropology and Specialist in International Development Studies.
Breadth Requirement: Social & Behavioural Sciences

ANTC61H3 Medical Anthropology: Illness and Healing in Cultural Perspective
Social and symbolic aspects of the body, the life-cycle, the representation and popular explanation of illness, the logic of traditional healing systems, the culture of North American illness and biomedicine, mental illness, social roots of disease, innovations in health care delivery systems.
Prerequisite: [ANTB19H3 & ANTB20H3]
Breadth Requirement: Social & Behavioural Sciences

ANTC62H3 Medical Anthropology: Biological and Demographic Perspectives
The examination of health and disease in ecological and socio-cultural perspective. Emphasis is placed on variability of populations in disease susceptibility and resistance in an evolutionary context. With its sister course, ANTC61H3, this course is designed to introduce students to the basic concepts and principles of medical anthropology. Principles of epidemiology, patterns of inheritance and biological evolution are considered.
Science credit
Prerequisite: [ANTB14H3 & ANTB15H3]
Breadth Requirement: Natural Sciences

ANTC66H3 Anthropology of Tourism
This course explores the global cultural phenomenon of tourism. Using case studies and historical perspectives, we investigate the complex motivations and consequences of travel, the dimensions of tourism as development, the ways tourism commodifies daily life, the politics of tourism representation, and the intersection of travel, authenticity and modernity.
Prerequisite: ANTB19H3 & ANTB20H3
Enrolment Limits: 80
Breadth Requirement: Social & Behavioural Sciences

ANTC67H3 Foundations in Epidemiology
Epidemiology is the study of disease and its determinants in populations. It is grounded in the biomedical paradigm, statistical reasoning, and that risk is context specific. This course will examine such issues as: methods of sampling, types of controls, analysis of data, and the investigation of epidemics.
Science credit
Prerequisite: [Any B-level course in Anthropology or Biology] & any statistics course.
Breadth Requirement: Quantitative Reasoning

ANTC68H3 Deconstructing Epidemics
Colonization, globalization and socio-ecological factors play an important role in origin, maintenance and emergence of old and new infectious diseases in human populations such as yellow fever, cholera, influenza, SARS. Issues of co-morbidity, the epidemiological transition, syndemics and the impact of global warming on the emergence of new diseases are discussed.
Science credit
Prerequisite: [Any B-level course in Anthropology or Biology] & any statistics course.
Breadth Requirement: Natural Sciences

ANTC69H3 The Anthropology of the Middle East
What makes the Middle East unique as a world region? This course considers topics like transnational religious movements, imperial and nationalist histories, issues of language diversity, the impact of new communication technologies, and regional conflicts. Ethnographic examples are drawn from different contexts.
Prerequisite: ANTB19H3 & ANTB20H3
Breadth Requirement: Social & Behavioural Sciences

ANTC99H3 Primate Evolution
This course examines 65 million years of evolutionary history for non-human primates. The primary emphasis will be on the fossil record. Topics covered may include the
reconstruction of behaviour from fossil remains, the evolution of modern primate groups, and the origins of the Order. 

Prerequisite: ANTA01H3 or ANTB14H3

Enrolment Limits: 60

Breadth Requirement: Natural Sciences

**ANTD01H3 The Body in Culture and Society**

An ethnographic inquiry into the culturally configured human body as a reservoir of experiential knowledge, focus of symbolism, and site of social, moral, and political control. 

Prerequisite: ANTB19H3 & ANTB20H3 & at least 1.0 credit at the C-level in socio-cultural anthropology.

Enrolment Limits: 25

Breadth Requirement: Social & Behavioural Sciences

**ANTD04H3 The Anthropology of Violence and Suffering**

This course examines the social life of violence, its cultural production and political effects in a global perspective. It asks how social worlds are made and unmade through, against, and after violent events, how violence is remembered and narrated, and how ethnography might respond to experiences of suffering, trauma, and victimhood. 

Prerequisite: ANTB19H3 & ANTB20H3 & at least one additional C-level course in socio-cultural anthropology.

Enrolment Limits: 25

Breadth Requirement: Social & Behavioural Sciences

**ANTD05H3 Advanced Fieldwork Methods in Social and Cultural Anthropology**

This course provides students with experience in carrying out ethnographic research in the Greater Toronto Area. Working with the Center for Ethnography, students define and execute a research project of their own design. This course culminates in an original research paper that will be read by at least two faculty members. 

Prerequisite: ANTB19H3 & ANTB20H3 & ANTC60H3 & at least two additional C-level courses (1.0 credit) in socio-cultural anthropology. Preference will be given to Specialists and Majors in Anthropology, in that order.

Enrolment Limits: 25

Breadth Requirement: Social & Behavioural Sciences

**ANTD06H3 Reading Ethnography**

This course considers the reading and writing of ethnography the classic genre of socio-cultural anthropology. We examine what differentiates ethnography from other forms of research and how to distinguish ethnographic works of high quality. Also considered are the politics of representation, including how ethnographic writing may reflect unequal relationships of power. 

Prerequisite: ANTB19H3 & ANTB20H3 & at least two additional C-level courses (1.0 credit) in socio-cultural anthropology.

Enrolment Limits: 25

Breadth Requirement: Social & Behavioural Sciences

**ANTD07H3 Advanced Regional Seminar**

This course allows students to examine particular culture areas at an advanced level. Regions to be covered may include South Asia, East Asia, the Muslim World, Latin America, The Pacific, Europe, Africa, or North America. Specific case studies from the region will be used to highlight theoretical and ethnographic issues. 

Prerequisite: ANTB19H3 & ANTB20H3 & at least one previous area course & at least one additional C-level course in socio-cultural anthropology.

Enrolment Limits: 25

**ANTD13H3 Frontiers of Anthropology: A Biological Perspective**

This advanced seminar course primarily for majors and specialists in biological anthropology. Topic to be announced annually.

Prerequisite: ANTB14H3 & ANTB15H3 & at least one C-level course in biological anthropology.

Enrolment Limits: 25

**ANTD15H3 Frontiers of Socio-Cultural Anthropology**

An advanced seminar course primarily for specialists and majors in Anthropology. Topic changes annually and is linked to the theme of our seminar series for the year. Students will attend talks by 2-3 guest speakers in addition to the regular seminar. In previous years the theme has been Masculinities, Pilgrimage, History and Historicities.

Prerequisite: ANTB19H3 & ANTB20H3 & at least two C-level courses in socio-cultural anthropology

**ANTD16H3 Biomedical Anthropology**

This course is designed for advanced students seeking an intensive examination of specific problems in medical Anthropology. Problems to be discussed include: genetic disorders in families and populations, the interaction of malnutrition and infectious diseases in human populations, chronic non-infectious diseases in populations today, and epidemicology and medical anthropology as complementary disciplines. 

Science credit

Prerequisite: ANTC62H3 and one additional C-level full credit in Biological Anthropology

Breadth Requirement: Natural Sciences

**ANTD17H3 Medical Osteology: Public Health Perspectives on Human Skeletal Health**

This seminar course will examine the clinical, epidemiological and public health literature on osteoporosis and other conditions impacting skeletal health. The course will also explore the potential economic impacts of osteoporosis on Canada's health care system given emerging demographic changes. 

Science credit

Prerequisite: ANTC47H3 & ANTC48H3

Breadth Requirement: Natural Sciences

**ANTD21H3 Theory and Methodology in Primatology**

This seminar course will examine current socio-ecological theory in primatology and explore different methods for studying and sampling primate behaviour. 

Science credit

Prerequisite: ANTB22H3 & ANTC23H3

Enrolment Limits: 25

**ANTD24H3 The History of Anthropological Thought**

An overview of the history of socio-cultural anthropology. This course focuses on certain key theoretical debates which run through it and largely determine the "state of the art" today. Evolutionary, diffusionist, psychological, cross-cultural,
functionalist, structuralist, hermeneutical and other classical approaches are among those that will be considered through the works of major figures like, Tylor, Durkheim, Boas, Kroeber, Malinowski, Radcliffe-Brown, Levi-Strauss, and others, up to the present. An attempt will be made to understand these individuals in terms of the social and intellectual climates in which they wrote. 

Prerequisite: ANTB19H3 & ANTB20H3 & at least 1.0 credit at the C-level in socio-cultural anthropology 

Breadth Requirement: Social & Behavioural Sciences

**ANTD25H3 Medical Primatology: Public Health Perspectives on Zoonotic Diseases**
This course will examine the social and cultural contexts of animal-to-human disease transmission globally, and the public risks associated zoonoses present here in Canada. The course will incorporate both anthropological and epidemiological perspectives. 

Science credit 

Prerequisite: ANTB14H3 & ANTB15H3 & HLTA01H3 & [ANTC35H3 or SOCB06H3 or STAB22H3] 

Breadth Requirement: Natural Sciences

**ANTD31H3 Advanced Research in Anthropology**
Directed critical examination of specific problems in Anthropology, based on library and/or field research. These courses are available in exceptional circumstances and do not duplicate regular course offerings. Students are advised that they must obtain consent from the supervising instructor before registering. Individual tutorials, as arranged. A minimum B plus average is normally required to be considered for these courses. May be science credit or area course depending on topic.

Prerequisite: Permission of the instructor & ANTA01H3 & ANTA02H3 & two full credits in Anthropology, one of which must be at the C-level

**ANTD35H3 Bioarchaeology**
This course will focus on a new direction in anthropology, exploring the potential of skeletal remains in reconstructing past lifeways. This seminar style class will build upon concepts introduced in Human Osteology courses. Additionally, more advanced methods of reconstructing patterns of subsistence, diet, disease, demography and physical activity.

Prerequisite: ANTC47H3 and ANTC48H3

Exclusion: ANT434H, ANT441H

Enrolment Limits: 45

Breadth Requirement: Natural Sciences

**ANTD99H3 Advanced Topics in Primate Evolution**
This course will examine questions of particular controversy in the study of Primate Evolution. Topics to be covered may include the ecological context of primate origins, species recognition in the fossil record, the identification of the first anthropoids, and the causes of extinction of the subfossil lemurs.

Prerequisite: ANTB14H3 & at least one C-level course (1.0 credit) in biological anthropology.

Exclusion: ANT13H3 if completed in the 2010/2011 academic year

Recommended Preparation: ANTC99H3

Enrolment Limits: 25

Breadth Requirement: Natural Sciences

**Art History**
See the Visual and Performing Arts section of this Calendar

**Arts Management**
See the Visual and Performing Arts section of this Calendar

**Applied Microbiology (formerly Industrial Microbiology)**

Faculty List
S.A. Brunt, B.Sc., M.Sc., Ph.D. (Toronto), Lecturer

**SPECIALIST (JOINT) PROGRAM IN APPLIED MICROBIOLOGY (SCIENCE)**
Supervisor: S. Brunt Email: applied-microbiology@utsc.utoronto.ca

This UTSC-Centennial College joint specialist program combines theory and technical experience in areas related to applied and industrial microbiology. The UTSC courses provide students theoretical and academic depth in cell and molecular biology, biochemistry and microbiology, while Centennial's courses provide invaluable applied and practical experience. Project work, in consultation with faculty, allows students to develop skills in laboratory research and techniques, report writing and presentation. By taking courses at both UTSC and Centennial, students are able to earn a UTSC Honours B.Sc. degree and qualify for a Biotechnology Technologist-Industrial Microbiology Diploma from Centennial College. Graduates from this program are well trained to take positions in the food, chemical, pharmaceutical, cosmetic and other related industries. This includes positions in product development, product production and sales management. Opportunities also exist in government and environmental agencies, as well as the option to pursue graduate work.

**Program Admission**
Students should register for Centennial courses using ROSI. However, to complete the registration process, you must follow up the ROSI registration process by contacting (via email) the Centennial College Biotechnology Coordinator, Allan Richardson (arichard@centennialcollege.ca). Once you have provided him with your course selections, you are then formally registered at
Centennial. Registration in Centennial courses does not begin until the second year of the program. For additional information about admission to this program, see the "Joint Programs with Centennial College" section of this *Calendar*.

**Program Requirements**

This program consists of 16.0 required credits (9.5 at UTSC and 6.5 at Centennial). Since a total of 20.0 credits are required to complete a UTSC degree, students taking this program should additionally take 4.0 credits of UTSC elective courses. When choosing electives keep in mind the minimum breadth requirements that must be met to complete a degree. It is advised that, including electives, students should plan to take 5.0 credits in each year of their four year degree. Students should note that they may also be able to accelerate completion of their program and degree by taking advantage of summer course offerings at UTSC and Centennial. Note that courses with the designators IMC and STE are taught at Centennial College's HP Science and Technology Centre campus, located within 5 minutes walking distance of the UTSC campus.

**Required Courses and Suggested Course Sequence**

**First Year**

**1.0 Credit of Introductory Biology Courses:**
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

**1.0 Credit in Chemistry**
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

**1.0 Credit in Mathematics**
MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences

**0.5 Credit in Statistics or Computer Science**
Choose from:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology
CSCA08H3 Introduction to Computer Programming
CSCA20H3 Computer Science for the Sciences
PSCB57H3 Introduction to Scientific Computing

**Second Year**

**2.0 Credits of Biology Core Courses and Lab**
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB12H3 Cell and Molecular Biology Laboratory
BIOB50H3 Ecology

**1.0 Credit of Organic Chemistry Courses**
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

**1.5 Credits of Industrial Microbiology Courses at Centennial**
*IMCB01H3 Microbiology Basics
*IMCB02H3 Microbial Techniques
*IMCB03H3 Lab Instrumentation

**Third Year**

**2.0 Credits of core Biology/Microbiology Courses**
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC15H3 Genetics
BIOC17H3 Microbiology: The Bacterial Cell
EESC30H3 Microbial Biogeochemistry

**3.0 Credits of Industrial Microbiology Courses at Centennial**
*IMCB04H3 Food Microbiology
*IMCB05H3 Microbiology Project
*STEB07H3 Analytical Chemistry and Applications
*IMCB06H3 Pharmaceutical Microbiology
*IMCB07H3 Food Chemistry
*IMCB08H3 Biochemistry and Applications I
Fourth Year

1.0 Credit of Advanced D-level Biology courses
Choose from:
- BIOD17H3 Seminars in Cellular Microbiology
- BIOD21H3 Advanced Molecular Biology Laboratory
- BIOD22H3 Molecular Biology of the Stress Response
- BIOD25H3 Genomics
- BIOD26H3 Fungal Biology and Pathogenesis
- BIOD29H3 Pathobiology of Human Disease
- EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments

2.0 Credits of Industrial Microbiology Courses at Centennial
*IMCC01H3 Advanced Microbiology Project
*IMCC02H3 Microbial Genetics
*IMCC03H3 Biochemistry and Applications II
*IMCC04H3 Environmental Microbiology

B. Complementary Elective Courses (optional)
When selecting electives, students may wish to consider the following courses that may be complementary to their program:
- HLTA01H3 Plaques and Peoples
- (HLTA10H3) Introduction to Research in Health Studies
- HLTB04H3 Health and the Urban Environment
- HLTC03H3 Politics of Canadian Health Studies
- (BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
- BIOB31H3 Plant Physiology
- BIOB31H3 Evolution
- BIOC39H3 Immunology
- BIOC65H3 Environmental Toxicology
* a minimum of 60% is required in courses marked with an asterisk in order to maintain standing in the program.

IMCB01H3 Microbiology Basics
Basic principles of microbiology including study of microscopic organisms (bacteria, viruses, protozoans, algae, and fungi), the isolation, cultivation and identification of microbes, host-parasite relationships as they relate to disease, microbial and molecular genetics, growth and control of microbes, and the human immune response to microbes. Limited to students in the Joint Program in Applied Microbiology or the Joint Program in Environmental Science and Technology. Prerequisite: BIOA01H3 & BIOA02H3
Exclusion: IMCB01H3 may not be taken after or concurrently with BIOC17H3, (MBY377H) or MGY377H.
Breadth Requirement: Natural Sciences

IMCB02H3 Microbial Techniques
Practical applications of the concepts covered in IMCB01H3. Limited to students in the Joint Program in Applied Microbiology. Prerequisite: BIOA01H3 & BIOA02H3
Corequisite: IMCB01H3
Exclusion: IMCB02H3 may not be taken after or concurrently with BIOC17H3, (MBY376H) or MGY376H.
Breadth Requirement: Natural Sciences

IMCB03H3 Lab Instrumentation
The use and function of a variety of chemical instruments for the purpose of chemical analysis. Students learn to perform accurate measurements and/or analyses of experimental samples, and acquire proficiency in laboratory procedures of instrumental analysis as applied to QC, government, and industry standards. Limited to students in the Joint Program in Applied Microbiology. Prerequisite: CHMA10H3 & CHMA11H3
Breadth Requirement: Natural Sciences

IMCB04H3 Food Microbiology
An introduction through theory and laboratory work to microorganisms of importance to the food and dairy industries. Quality control of raw materials and finished products, microbial metabolism, food and drug regulations and guidelines, theory of Good Manufacturing Practice for food manufacturers and Hazard Analysis and Critical Control Point Programs (HACCP). Limited to students in the Joint Program in Applied Microbiology. Prerequisite: IMCB01H3
Breadth Requirement: Natural Sciences

IMCB05H3 Microbiology Project
Practical experience in locating, collecting, and interpreting scientific information for the purpose of designing laboratory procedures. Students work individually under faculty supervision in a lab setting to perform the laboratory procedures and record the results and present a formal report. Limited to students in the Joint Program in Applied Microbiology. Prerequisite: IMCB01H3 & IMCB02H3
Breadth Requirement: Natural Sciences

IMCB06H3 Pharmaceutical Microbiology
Quality control and quality assurance as they apply to the pharmaceutical industry, based on current government regulations. Students acquire knowledge of microbial production and assay methods, enumerate and identify microorganisms from commercial products, and evaluate the anti-microbial effectiveness of disinfectants, preservatives, and antibiotics. Limited to students in the Joint Program in Applied Microbiology.
Astronomy

Faculty List

P. Artymowicz, M.Sc. (Warsaw University), Ph.D. (N. Copernicus Astron. Center, Polish Academy of Sciences), Professor
C.C. Dyer, B.Sc. (Bishop's), M.Sc., Ph.D. (Toronto), Professor
J.P. Lowman, B.Sc. (Toronto), M.Sc., Ph.D. (York, Canada), Associate Professor
G. Lorincz, B.Sc., M.Sc. (Toronto), Senior Lecturer
S. Tawfiq, B.Sc., M.Sc. (Al-Mustansiriyah), Ph.D. (Trieste, Italy), Senior Lecturer
J. Bayer Carpintero, B.Sc. (Los Andes, Bogota), M.Sc., Ph.D. (Toronto), Lecturer

Astronomy is at the same time one of the oldest and one of the most dynamic areas of science. It is the attempt to understand the environment in which humanity developed, from the solar system in which we find our direct and recent origins, to the largest distance scales in the universe typified by quasars and the big bang, in which we must search for the very origins of structure ranging from the solar system to the largest structures, such as large clusters of galaxies and cosmic voids. The past four decades have seen startling discoveries, such as the cosmic microwave background radiation, that have given us both new understanding of the universe and made us more aware of the problems still facing us in attaining a deeper understanding. The last decade has witnessed an explosion in the number of known planets, with more than five hundred already discovered in orbit around other stars in our Galaxy. In addition there has recently been a significant trend towards the integration of many of the ideas of modern high energy physics into astronomy, with particularly interesting developments concerning ideas about the very first seconds in the evolution of our universe. As more planets are discovered there promises to be an even stronger collaborative effort with disciplines such as chemistry and biology to discover the possible origins of life.

The full range of modern astronomical topics is covered in the introductory courses ASTA01H3 and ASTA02H3 at a level suitable for students without mathematical background. In addition, the course ASTB03H3 is intended for students who have taken no previous astronomy, and covers the history of modern astronomy. It is intended to provide a historical perspective on modern astronomy, and by example, an introduction to the evolution of a number of modern scientific areas. For students wishing to further their study in astronomy, there are a number of higher level courses, which are integral components of Major and Specialist programs.
in Physics and Astrophysics, and related areas. Refer to the Physics and Astrophysics section of this Calendar for details of these courses and these programs.

**Service Learning and Outreach (Previously known as Science Engagement)**
For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

**MAJOR PROGRAM IN PHYSICS AND ASTROPHYSICS (SCIENCE)**
See the Physics and Astrophysics section of this Calendar for program requirements.

**SPECIALIST PROGRAM IN NATURAL SCIENCES (SCIENCE)**
See the Physical Sciences section of this Calendar for program requirements.

**SPECIALIST PROGRAM IN PHYSICAL AND MATHEMATICAL SCIENCES (SCIENCE)**
See the Physical Sciences section of this Calendar for program requirements.

**SPECIALIST PROGRAM IN PHYSICS AND ASTROPHYSICS (SCIENCE)**
See the Physics and Astrophysics section of this Calendar for program requirements.

**MINOR PROGRAM IN ASTRONOMY AND ASTROPHYSICS (SCIENCE)**

**Program Requirements:**
Students must complete 5.0 full credits as follows:

- ASTB23H3 Astrophysics of Stars, Galaxies and the Universe
- PHYA10H3 Introduction to Physics IA
- PHYA21H3 Introduction to Physics IIA
- MATA30H3 Calculus I for Biological and Physical Sciences
- MATA23H3 Linear Algebra I
- [MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
- ASTC25H3 Astrophysics of Planetary Systems
- MATB41H3 Techniques of the Calculus of Several Variables I
- MATB42H3 Techniques of the Calculus of Several Variables II
- [ASTD01H3 Astrophysics Research Project or ASTD02H3 Supervised Reading in Astrophysics or any other AST C- or D-level course]
- ASTA01H3 Introduction to Astronomy and Astrophysics I: The Sun and Planets
  - The solar neighbourhood provides examples of astronomical bodies that can be studied by both ground-based and space vehicle based-observational instruments. The astronomical bodies studied range from cold and rocky planets and asteroids to extremely hot and massive bodies, as represented by the sun. This course considers astronomical bodies and their evolution, as well as basic parts of physics, chemistry, etc., required to observe them and understand their structure. The course is suitable for both science and non-science students.
  - Exclusion: AST101H
  - Breadth Requirement: Natural Sciences

- ASTA02H3 Introduction to Astronomy and Astrophysics II: Beyond the Sun and Planets
  - This course uses the basis developed in ASTA01H3 to extend consideration to all stars, galaxies and the universe. The structure and evolution of stars and galaxies is considered, with our own galaxy, the Milky Way, providing the opportunity for detailed study of a well-observed system. Even this system challenges us with many unanswered questions, and the number of questions increases with further study of the universe and its large-scale character. Current models and methods of study of the universe will be considered. The course is suitable for both science and non-science students.
  - Prerequisite: ASTA01H3
  - Exclusion: AST121H, AST201H
  - Breadth Requirement: Natural Sciences

**ASTB03H3 Great Moments in Astronomy**
An examination of the people, the background and the events associated with some major advances in astronomy. Emphasis is given to the role of a few key individuals and to how their ideas have revolutionized our understanding of nature and the Universe. The perspective gained is used to assess current astronomical research and its impact on society.
- Prerequisite: 4.0 full credits Exclusion: AST210H
- Breadth Requirement: Natural Sciences

**ASTB23H3 Astrophysics of Stars, Galaxies and the Universe**
- Prerequisite: MATA30H3 & [MATA36H3 or MATA37H3] & PHYA21H3
- Corequisite: MATB41H3
- Exclusion: (ASTB21H3), (ASTC22H3), [AST221H & AST222H]
- Breadth Requirement: Natural Sciences
ASTC25H3  Astrophysics of Planetary Systems
Prerequisite: MATB41H3 & PHYA21H3
Corequisite: MATB42H3
Exclusion: (ASTB21H3), (ASTC22H3), [AST221H & AST222H]
Breadth Requirement: Natural Sciences

ASTD01H3  Astrophysics Research Project
An application of individual effort to reading and research on a topic of current interest. The student will research on some topic of current interest in astrophysics and write a report ("mini thesis") on his or her work. The student is expected to gain an appreciation of the current state of knowledge about a particular topic of astrophysical interest and to become familiar with the basic methods of research. The topic will be selected by one of the instructors in consultation with the student. The bibliography is dependent upon the topic selected. Students are advised that they must obtain consent from the supervising instructor before registering for this course.
Prerequisite: ASTB23H3, ASTC25H3, 14.0 completed FCE's, cumulative GPA of at least 2.5, and permission from the coordinator.
Exclusion: AST425H, (ASTC01H3)

ASTD02H3 Supervised Reading in Astrophysics
An individual study program chosen by the student with the advice of, and under the direction of a faculty member. A student may take advantage of this course either to specialize further in a field of interest or to explore interdisciplinary fields not available in the regular syllabus.
Prerequisite: 14.0 credits, cumulative GPA of at least 2.5, and permission from the coordinator.
Exclusion: AST425H
Breadth Requirement: Natural Sciences

Biological Sciences

Faculty List
J.W. Gurd, B.A. (Mount Allison), Ph.D. (McGill), Professor Emeritus
C. Nalewajko, B.Sc., Ph.D., D.Sc. (University College London), Professor Emerita
J.C. Ritchie, B.Sc. (Aberdeen), Ph.D. (Sheffield), D.Sc. (Aberdeen), F.R.S.C., Professor Emeritus
J.C. Silver, B.Sc., Ph.D. (CUNY), Professor Emerita
A.H. Weatherley, B.Sc. (Sydney), M.Sc. (Tasmania), Ph.D. (Glasgow), Professor Emeritus
D.D. Williams, B.Sc. (North Wales), Dip. Ed. (Liverpool), M.Sc., Ph.D. (Waterloo), D.Sc. (Wales), Professor Emeritus
G.R. Williams, B.Sc., Ph.D., D.Sc. (Liverpool), F.R.S.C., Professor Emeritus
J.H. Youson, B.A. (Victoria), M.Sc. (McGill), Ph.D. (Western Ontario), Professor Emeritus
I.M. Campbell, B.Sc. (Alberta), M.A., Ph.D. (Toronto), Associate Professor Emeritus
R.E. Dengler, B.Sc., Ph.D. (California, Davis), Associate Professor Emeritus
M.F. Filosa, B.S. (St. Peter's), M.S. (Fordham), Ph.D. (Princeton), Associate Professor Emeritus
C. Pickett, B.S.C., M.A. (Toronto), Senior Lecturer Emerita
M.C.B. Andrade, B.Sc. (Simon Fraser), M.Sc. (Toronto), Ph.D. (Cornell), Associate Professor Emeritus
R. Boonstra, B.Sc. (Calgary), Ph.D. (British Columbia), Professor
I.R. Brown, B.Sc. (Carleton), Ph.D. (Texas), Professor
M.M. Campbell, B.Sc., Ph.D. (Guelph), M.A. (Oxon) (Oxford), Professor
H.J. Kronzucker, B.A., B.Sc., M.D. (Wuerzburg/British Columbia), Ph.D. (British Columbia), Professor
G.C. Vanlerberghe, B.Sc., M.Sc. (Western Ontario), Ph.D. (Queen's), Professor
S. Erb, B.Sc. (Wilfrid Laurier), M.A., Ph.D. (Concordia), Associate Professor
R.R. Fulthorpe, B.Sc. (Winnipeg), M.Sc. (Manitoba), Ph.D. (Toronto), Associate Professor
N.R. Lovejoy, B.Sc. (Florida State), Associate Professor
A.C. Mason, B.Sc. (Guelph), M.Sc., Ph.D. (Toronto), Associate Professor
S.G. Reid, B.Sc., Ph.D. (Ottawa), Associate Professor
Overview

Biological Sciences offers five specialist programs: Biodiversity, Ecology and Evolution; Cell and Molecular Biology (with or without the Co-op option); Human Biology; and Integrative Biology. The Biodiversity, Ecology and Evolution specialist (BEES) program presents a foundation for understanding how ecology and evolution shape species, communities and ecosystems. In the Cell and Molecular Biology programs students explore the cellular and sub-cellular mechanisms underlying life processes. The Human Biology specialist program emphasizes the biology of the human species and is tailored for students who wish to pursue a career in a health-related field. The Integrative Biology specialist program approaches biological questions in a multidisciplinary fashion, with course work in a range of biology sub-disciplines.

Biological Sciences also offers three major programs, one minor program and two joint specialist programs. The major programs (in Biodiversity, Ecology and Evolution; Human Biology; and Biology) allow students to combine their studies in biology with studies in either an unrelated program or in a complementary major program such as neuroscience, environmental science, biological chemistry, health studies or psychology. The minor program in Biology is intended for students who have an interest in biology, but wish to focus their studies in a different discipline. Two joint specialist programs are also offered by Biological Sciences in collaboration with Centennial College. These include the joint specialist program in Applied Microbiology and the joint specialist program in Paramedicine. Both joint programs include a combination of university courses and courses taken at the neighbouring Centennial College campus. These programs are outlined in the Applied Microbiology or Paramedicine sections of this Calendar.

Students are advised to consult the specific program requirements for their degree, and, if necessary, to meet with the appropriate program supervisor for advice on completion of their program requirements. In some instances courses from other University of Toronto campuses or other institutions may be used to satisfy program requirements, but such substitutions must be pre-approved by the program supervisor. Students are encouraged to check the information that follows thoroughly. Other useful information can be found on the Department of Biological Sciences web site at www.utsc.utoronto.ca/biosci

Admission to Biological Sciences programs

Students apply to one or more Biological Sciences programs after completion of a minimum of 4.0 full credits, including 1.0 credit in Biology, 1.0 credit in Chemistry, and 0.5 credit in Mathematics or Statistics and with a cumulative grade point average (CGPA) of at least 2.0. Application for admission is made to the Registrar through ROSI, in April/May and July/August. See the UTSC Registrar's website for information on program (Subject POSI) selection at: www.utsc.utoronto.ca/subjectpost.

Pre-program supervision in Biological Sciences

Biological Sciences has a pre-program supervisor available to advise students who have not yet chosen a program (primarily 1st year students) on degree and program related matters. Please contact Sean Ramrattan at ramrattan@utsc.utoronto.ca; Room SW421D or 416-287-7404 if you have questions of this nature.

Enrolment in Biological Sciences courses

Priority access to B, C and D level Biology courses is given to students enrolled in Biological Sciences specialist and major programs and other programs requiring these courses. During the first two weeks of Fall/Winter registration, the courses will be restricted to these students. Provided space is available, the courses will be opened up to other students by the third week of the registration period.

Important note about Biological Sciences course codes

Effective 2010-2011, the first three characters of Biological Sciences course codes have changed from BGY to BIO. The rest of the code remains the same. For example, BIOA01H3 is the new equivalent of the former BGYA01H3.

Second Year Core Courses

Students are STRONGLY advised to take ALL of the 2nd year core courses (BIOB10H3, BIOB11H3, (BIOB30H3), BIOB31H3, BIOB34H3, BIOB35H3, BIOB35H3, BIOB51H3) as well as a core lab course (BIOB12H3 or BIOB32H3 or BIOB33H3 or BIOB52H3) during their 2nd year of study. This will assist in the selection of upper-level courses, provide the greatest flexibility to satisfy the prerequisites of such courses, and give the background and experience needed to excel in upper-level courses. Failure to take the entire set of core courses in 2nd year can result in course timetabling conflicts and unfavourable exam schedules (e.g. back-to-back exams) in your upper years. Students are unlikely to find suitable substitutes for these courses at the St. George or UTM campuses.

Service Learning and Outreach (previously known as Science Engagement)

For experiential learning through community outreach and classroom in-reach please see the Centre for Teaching and Learning section of this Calendar.
SPECIALIST PROGRAM IN BIODIVERSITY, ECOLOGY AND EVOLUTION (SCIENCE)

**Supervisor:** M. Andrade  
**Email:** biodiversity@utsc.utoronto.ca

This program presents a foundation for understanding how ecology and evolution shape organismal features (from morphology and physiology to behaviour) and the structure and function of communities and ecosystems. Ultimately these processes determine the broad patterns of organization of life on earth and biodiversity. The challenges to biodiversity are daunting. Habitat destruction, biological invasions and climate change are causing loss of species and disruption of ecosystems worldwide. BEE graduates will be well trained to understand and actively seek solutions to these problems. This program will show how ecological and evolutionary perspectives can be used to understand and predict the outcome of dynamic interactions among organisms, populations, species, and communities. Students will be well trained to take positions in government agencies, consulting firms or NGO's; able to continue with graduate studies in science for academic careers; or able to pursue careers in business or law related to environmental issues, stewardship and sustainable development.

**Program Requirements**

This program consists of 14.5 required credits. Since a total of 20 credits are required to complete a four year degree, students taking this program should also take an additional 5.5 credits of elective courses. In selecting options and electives, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements). It is advised that, including electives, students should plan to take 5 credits in each year of their four year degree.

**A. Required Courses**

*First Year*

1.0 Credit of Introductory Biology Courses

- BIOA01H3 Life on Earth: Unifying Principles
- BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit of Introductory Chemistry Courses

- CHMA10H3 Introductory Chemistry I: Structure and Bonding
- CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit in Mathematics

- MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences

0.5 Credit in Physics

Choose from:

- PHYA10H3 Introduction to Physics IA
- PHYA11H3 Introduction to Physics IB

0.5 Credit in Computer Science

Choose from:

- CSCA08H3 Introduction to Computer Programming
- CSCA20H3 Computer Science for the Sciences
- PSCB57H3 Introduction to Scientific Computing (this course could also be taken in second year)

*Second Year*

3.0 Credits of Biology Core Courses

- BIOB10H3 Cell Biology
- BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
- (BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
- BIOB31H3 Plant Physiology
- BIOB50H3 Ecology
- BIOB51H3 Evolutionary Biology

0.5 Credit of Biology Core Labs

- BIOB52H3 Ecology and Evolutionary Biology Laboratory

0.5 Credit in Statistics

Choose from:

- STAB22H3 Statistics I
- PSYB07H3 Data Analysis in Psychology

*Third Year*

2.0 Credits of C-level Ecology and Evolution Foundation Courses

- BIOC16H3 Evolutionary Genetics and Genomics
- BIOC50H3 Macroevolution
- BIOC59H3 Advanced Population Ecology
- BIOC61H3 Community Ecology and Environmental Biology
Third/Fourth Year
4.5 credits of C- & D-level courses from Bins 1 and 2 below. This must include at least one credit from each bin and at least one credit total at the D-level.

Bin 1: C- & D-level Ecology and Evolution Courses
Choose from:
- BIOC51H3 Tropical Biodiversity Field Course
- BIOC52H3 Ecology Field Course
- BIOC58H3 Biological Consequences of Global Change
- BIOC63H3 Conservation Biology
- BIOC65H3 Environmental Toxicology
- BIOC67H3 Inter-University Biology Field Course
- BIOD25H3 Genomics
- BIOD52H3 Special Topics in Biodiversity and Systematics
- BIOD60H3 Spatial Ecology
- BIOD62H3 Species and Speciation
- BIOD66H3 Causes & Consequences of Biodiversity
- EESC04H3 Biodiversity and Biogeography

Bin 2: C- & D-level Organismal Biology Courses
Choose from:
- BIOC37H3 Comparative Plant Form and Function
- BIOC38H3 Plants and Society
- BIOC54H3 Animal Behaviour
- BIOC62H3 Role of Zoos in Conservation
- BIOD26H3 Fungal Biology & Pathogenesis
- BIOD33H3 Comparative Animal Physiology
- BIOD37H3 Biology of Plant Stress
- BIOD43H3 Animal Movement and Exercise
- BIOD45H3 Animal Communication
- BIOD48H3 Ornithology and Herpetology
- BIOD53H3 Special Topics in Behavioural Ecology
- EESC30H3 Microbial Biogeochemistry

B. Senior Research Courses (optional)
Students interested in graduate research are encouraged to take one or more of the independent research courses offered in Biological Sciences as part of their degree.
- BIOD95H3 Supervised Study in Biology
- BIOD98Y3 Directed Research in Biology
- BIOD99Y3 Directed Research in Biology

C. Complementary Elective Courses (optional)
This list of courses from other departments complements a degree in Biodiversity, Ecology and Evolution and hence students may want to consider these courses as potential electives. Please note that some of these courses require prerequisites not included in this program. Students are not required to take any of these courses; they are provided for guidance only.
- EESA06H3 Introduction to Planet Earth
- EESA10H3 Human Health and the Environment
- EESB16H3 Feeding Humans - The Cost to the Planet
- EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments
- GGRA02H3 The Geography of Global Processes
- GGRA30H3 Geographic Information Systems (GIS) and Empirical Reasoning
- GGRC44H3 Environmental Conservation and Sustainable Development
- NROB60H3 Neuroanatomy Laboratory
- NROC34H3 Neuroethology
- NROC61H3 Learning and Motivation
- NROC64H3 Sensory and Motor Systems
- PSYA01H3 Introductory Psychology: Part I
- PSYA02H3 Introductory Psychology: Part II
- PSYB45H3 Behaviour Modification: Origins and Applications
- PSYB64H3 An Introduction to Physiological Psychology

SPECIALIST PROGRAM IN CELL AND MOLECULAR BIOLOGY (SCIENCE)
Supervisor: C. Hasenkampf Email: cell-and-molecular-biology@utsc.utoronto.ca
The Cell and Molecular Biology program strives to help students construct a broad foundation of knowledge across the major
disciplines of biology in the first two years of study, and combine this knowledge with an increasingly analytical and reflective approach to learning. Upon this base students deepen their knowledge of biological processes that occur at the cellular and molecular level through the course work of their third and fourth years. This is a laboratory-rich program that integrates an understanding of chemical and physical processes with our complex biological systems. Because of broad training in biology and rigorous cross training in cognate disciplines graduates are well positioned to apply to professional and graduate schools or work in a broad range of government regulatory agencies, clinical or research-focused industries and other careers that require the union of strong analytical and technical skills.

Program Requirements
This program consists of 13.5 required credits. Since a total of 20 credits are required to complete a degree, students taking this program should also take an additional 6.5 credits of elective courses. In selecting options and electives, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).

First Year
1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit of Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit in Mathematics
Choose from:
MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences
MATA30H3 & MATA36H3 Calculus I for Biological and Physical Sciences & Calculus II for Physical Sciences

1.0 Credit in Physics
Choose 0.5 credit from:
PHYA10H3 Introduction to Physics IA
PHYA11H3 Introduction to Physics IB

Choose 0.5 credit from:
PHYA21H3 Introduction to Physics IIA
PHYA22H3 Introduction to Physics IIB

0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I (this course could also be taken in second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in second year)

Second Year
3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB31H3 Plant Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

0.5 Credit of Biology Core Labs
BIOB12H3 Cell and Molecular Biology Laboratory

1.0 Credit of Organic Chemistry Courses
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Third Year
2.5 Credits of Biology C-level Courses
BIOC12H3 Biochemistry I: Proteins & Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC15H3 Genetics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC23H3 Practical Approaches to Biochemistry
0.5 Credit in Computer Science
Choose from:
CSCA08H3 Introduction to Computer Programming
CSCA20H3 Computer Science for the Sciences
PSCB57H3 Introduction to Scientific Computing
Computer science might be taken in an earlier year.

Third/Fourth Year
0.5 Credit of Cognate Biology Courses
Choose from:
BIOC14H3 Genes, Environment and Behaviour
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
(BGYC22H3) Vertebrate Histology: Organs
BIOC31H3 Molecular Aspects of Plant Development
BIOC39H3 Immunology
BIOD37H3 Biology of Plant Stress

Fourth Year
0.5 Credit in Advanced Molecular Techniques
BIOD21H3 Advanced Molecular Biology Laboratory

0.5 credit of D-level Research-oriented "Cell & Molecular" Course Work
Choose from:
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD22H3 Molecular Biology of the Stress Response
BIOD23H3 Special Topics in Cell Biology
BIOD25H3 Genomics
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD95H3 Supervised Study in Biology
BIOD98Y3 Directed Research in Biology

Note: Any of these courses not used to satisfy this requirement may be used to fulfill the '0.5 Credit of Cognate Biology Courses'.

SPECIALIST (CO-OPERATIVE) PROGRAM IN CELL AND MOLECULAR BIOLOGY (SCIENCE)
Supervisor: C. Hasenkampf Email: cell-and-molecular-biology@utsc.utoronto.ca
Co-op Contact: askcoop@utsc.utoronto.ca

The Cell and Molecular Biology program strives to help students construct a broad foundation of knowledge across the major disciplines of biology in the first two years of study, and combine this knowledge with an increasingly analytical and reflective approach to learning. Upon this base students deepen their knowledge of biological processes that occur at the cellular and molecular level through the coursework of their third and fourth years. This is a laboratory-rich program that integrates an understanding of chemical and physical processes with our complex biological systems. Because of broad training in biology and rigorous cross training in cognate disciplines graduates are well positioned to apply to professional and graduate schools or work in a broad range of government regulatory agencies, clinical or research-focused industries and other careers that require the union of strong analytical and technical skills.

The co-op option of the Cell and Molecular Biology program complements and punctuates academic course work with full time work terms in research laboratories, government, health care, or in public or private industry. These placements help students define and refine their career and/or professional school goals. For information on admissions, fees, work terms and standing in the Program, please see the Co-operative Programs section of this Calendar.

Program Admission
Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.
Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website: www.utsc.utoronto.ca/registrar. The minimum qualifications for entry are 5.0 credits including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, ([MATA20H3 & (MATA21H3)] or [MATA30H3 & [MATA35H3 or MATA36H3]], [PHYA10H3 or PHYA11H3], plus a cumulative GPA of at least 2.75.

Program Requirements
This program consists of 13.5 required credits plus two work-terms. Since a total of 20 credits are required to complete a degree, students taking this program should also take an additional 6.5 credits of elective courses. In selecting options and electives, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).
A. Course Requirements

First Year

1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit of Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit in Mathematics
Choose from:
MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences
MATA30H3 & MATA36H3 Calculus I for Biological and Physical Sciences & Calculus II for Physical Sciences

1.0 Credit in Physics
Choose 0.5 credit from:
PHYA10H3 Introduction to Physics IA
PHYA11H3 Introduction to Physics IB

Choose 0.5 credit from:
PHYA21H3 Introduction to Physics IIA
PHYA22H3 Introduction to Physics IIB

0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I (this course could also be taken in second year)
PSYB07H3 Data Analysis in Psychology (this course could also be taken in second year)

Second Year

3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB31H3 Plant Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

0.5 Credit of Biology Core Labs
BIOB12H3 Cell and Molecular Biology Laboratory

1.0 Credit of Organic Chemistry Courses
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II
Computer science might be taken in this year and will enhance Co-op placement options.

Third Year

2.5 Credits of Biology C-level Courses
BIOC12H3 Biochemistry I: Proteins & Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC15H3 Genetics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC23H3 Practical Approaches to Biochemistry

0.5 Credit in Computer Science
Choose from:
CSCA08H3 Introduction to Computer Programming
CSCA20H3 Computer Science for the Sciences
PSCB57H3 Introduction to Scientific Computing
Third/Fourth Year

0.5 Credit of Cognate Biology Courses
Choose from:
- BIOC14H3 Genes, Environment and Behaviour
- BIOC19H3 Animal Developmental Biology
- BIOC21H3 Vertebrate Histology: Cells and Tissues
- (BGYC22H3) Vertebrate Histology: Organs
- BIOC31H3 Molecular Aspects of Plant Development
- BIOC39H3 Immunology
- BIOD37H3 Biology of Plant Stress

Fourth Year

0.5 Credit in Advanced Molecular Techniques
BIOD21H3 Advanced Molecular Biology Laboratory

0.5 Credit of D-level Research-Oriented "Cell & Molecular" Course Work
Choose from:
- BIOD17H3 Seminars in Cellular Microbiology
- BIOD19H3 Epigenetics in Health and Disease
- BIOD23H3 Molecular Biology of the Stress Response
- BIOD27H3 M_olecular Endocrinology
- BIOD95H3 Supervised Study in Biology
- BIOD98Y3 Directed Research in Biology

Note: Any of these courses not used to satisfy this requirement can be used to fulfill the ‘0.5 Credit of Cognate Biology Courses’.

B. Work Term Requirements
The program requires eight four-month terms of study and two four-month work terms. Practical work experience in the fields of cell biology, genetics, molecular biology or biotechnology are alternated with study terms to enhance academic studies and develop professional and personal skills. Students must submit both an oral and written report on each work term for evaluation and will also complete a standardized form, assessing the quality of their co-op work term. Students are expected to do at least one of their work placements in the fall or winter term.

To be eligible for their first work term, students must be in good standing in the program and have completed at least 10.0 credits, including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, [(MATA20H3) & (MATA21H3)] or [MATA30H3 & [MATA35H3 or MATA36H3]], [PHYA10H3 or PHYA11H3], BIOC12H3, BIOC15H3 or [BIOC13H3 & BIOC17H3] and have received a satisfactory evaluation for their performance and for their reports on their first work term. Completion of Statistics and Computer Science course work, before the second placement, is highly recommended.

SPECIALIST PROGRAM IN CONSERVATION BIOLOGY (SCIENCE)
The specialist program in Conservation Biology has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it. Students who had intended to enrol in the program in 2010/2011 might want to consider the new programs in Biodiversity, Ecology & Evolution.

SPECIALIST (CO-OPERATIVE) PROGRAM IN CONSERVATION BIOLOGY (SCIENCE)
The specialist (co-operative) program in Conservation Biology has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it.

SPECIALIST PROGRAM IN HUMAN BIOLOGY (SCIENCE)
Supervisor: A. Ashok Email: human-biology@utsc.utoronto.ca
The Human Biology specialist program provides a solid foundation of introductory science courses and core biology courses while emphasizing, in the upper years, issues related to human health, the nature of humans and their culture as well as the interaction of the human species with the environment. The first year of the program emphasizes introductory courses in biology, chemistry, calculus, physics and psychology. The second year of the program emphasizes core courses in cell biology, molecular biology, physiology, ecology, evolution and anatomy that provide the basis for continued specialization in the third and fourth years. The upper years of the program emphasize specialized courses in anatomy, histology, anthropology, biochemistry, endocrinology, immunology, microbiology, physiology, psychology, pathology and pathobiology. This program is suited for those students who wish to go onto
health-related fields such as medicine, dentistry, nursing, pharmacy, physiotherapy and health policy/management or graduate studies in these, and other, areas such as physiology, medicine and endocrinology.

Program Requirements
This Program consists of 15.5 credits. As a total of 20 credits are required to complete a degree, students taking this program should also take an additional 4.5 credits of elective courses. In selecting options and electives, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).

Required Courses and Suggested Course Sequence
First Year
1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit of Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit of Mathematics
MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences

1.0 Credit of Introductory Physics Courses
PHYA11H3 Introduction to Physics IB
PHYA22H3 Introduction to Physics IIB

1.0 Credit of Introductory Psychology Courses
PSYA01H3 Introductory Psychology: Part I
PSYA02H3 Introductory Psychology: Part II

Second Year
3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB31H3 Plant Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

1.0 Credit of Biology Core Labs
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy Laboratory

1.0 Credit of Organic Chemistry Courses
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II

Third/Fourth Years
3.5 Credits of C-level Biology Courses
Choose From:
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC14H3 Genes, Environment and Behaviour
BIOC15H3 Genetics
BIOC16H3 Evolutionary Genetics and Genomics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
(BGYC22H3) Vertebrate Histology: Organs
BIOC23H3 Human Physiology I
BIOC24H3 Human Physiology II: Lecture and Laboratory
BIOC25H3 Immunology
BIOC28H3 Biological Consequences of Global Change
BIOC65H3 Environmental Toxicology
1.0 Credit of D-level Biology Courses
Choose From:
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD26H3 Fungal Biology and Pathogenesis
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobiology of Human Disease
BIOD33H3 Comparative Animal Physiology
BIOD43H3 Animal Movement and Exercise
BIOD65H3 Pathologies of the Nervous System

0.5 Credit in Statistics
Choose From:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

0.5 Credit in Psychology
Choose From: Any B-, C- or D-Level Psychology Course

SPECIALIST PROGRAM IN INTEGRATIVE BIOLOGY (SCIENCE)
Supervisor: K. Persaud Email: integrative-biology@utsc.utoronto.ca
In today's rapidly changing world, the development of solutions to combat some of the most pressing global challenges such as climate change, emerging diseases, hunger and species extinction, requires an integrative approach in which expertise is drawn from disparate biological and other disciplines. The specialist program in Integrative Biology provides the student with a solid knowledge base in key core and foundational areas of biology while also providing a breadth of knowledge to support more specialized studies and focused training in a range of disciplines (for examples, see below under "Routes to Specialization"). Students who complete this program will be well positioned for a career in many aspects of the biological sciences or to undertake further studies at the professional or graduate level.

Program Requirements
This program consists of 14.5 required credits including at least 4.0 credits at the C- or D-level of which at least 1.0 must be at the D-level. Since a total of 20 credits are required to complete a four year degree, students taking this program should also take an additional 5.5 credits of elective courses. In selecting options and electives students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements). It is advised that, including electives, students should plan to take 5 credits in each year of their four year degree.

A. Required Courses
First Year
1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit in Chemistry
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit in Mathematics
MATA30H3 & MATA35H3 Calculus I for Biological and Physical Sciences & Calculus II for Biological Sciences

0.5 Credit in Physics
Choose from:
PHYA10H3 Introduction to Physics IA
PHYA11H3 Introduction to Physics IB

0.5 Credit in Computer Science
Choose from:
CSCA08H3 Introduction to Computer Programming
CSCA20H3 Computer Science for the Sciences
PSCB57H3 Introduction to Scientific Computing (this course could also be taken in second year)

Second Year
3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB31H3 Plant Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

0.5 Credit of Biology Core Labs
Choose from:
BIOB12H3 Cell and Molecular Biology Laboratory
BIOB32H3 Animal Physiology Laboratory
BIOB33H3 Human Development and Anatomy Laboratory
BIOB52H3 Ecology and Evolutionary Biology Laboratory

0.5 Credit in Statistics
Choose from:
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Third Year
1.5 Credits of Biology Foundation Courses
BIOC15H3 Genetics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC54H3 Animal Behaviour

Third/Fourth Year
0.5 Credit of Advanced Courses in Physiology, Biochemistry and Neurobiology
Choose from:
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC23H3 Practical Approaches to Biochemistry
BIOC32H3 Human Physiology I
BIOC33H3 Human Physiology II: Lecture and Laboratory
BIOC34H3 Human Physiology II: Lecture
BIOC39H3 Immunology
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC23H3 Practical Approaches to Biochemistry
BIOC32H3 Human Physiology I
BIOC33H3 Human Physiology II: Lecture and Laboratory
BIOC34H3 Human Physiology II: Lecture
BIOC39H3 Immunology
BIOC65H3 Environmental Toxicology
ANTC67H3 Foundations in Epidemiology
NROC34H3 Neuroethology
NROC61H3 Learning and Motivation
NROC64H3 Sensory and Motor Systems
PSYC31H3 Clinical Neuropsychology
BIOD27H3 Molecular Endocrinology
BIOD29H3 Pathobesity of Human Disease
BIOD43H3 Animal Movement and Exercise
BIOD65H3 Pathologies of the Nervous System
NROD67H3 Psychobiology of Aging

0.5 Credit of Advanced Courses in Ecology and Conservation
Choose from:
BIOC50H3 Macroevolution
BIOC51H3 Tropical Biodiversity Field Course
BIOC52H3 Ecology Field Course
BIOC58H3 Biological Consequences of Global Change
BIOC59H3 Advanced Population Ecology
BIOC61H3 Community Ecology and Environmental Biology
BIOC62H3 Role of Zoos in Conservation
BIOC63H3 Conservation Biology
BIOC67H3 Inter-University Biology Field Course
EESC04H3 Biodiversity and Biogeography
BIOD52H3 Special Topics in Biodiversity and Systematics
BIOD60H3 Spatial Ecology
BIOD62H3 Species and Speciation
BIOD66H3 Causes and Consequences of Diversity
0.5 Credit of Advanced Courses in Genes and Development
Choose from:
BIOC14H3 Genes, Environment and Behaviour
BIOC16H3 Evolutionary Genetics and Genomics
BIOC19H3 Animal Developmental Biology
BIOC31H3 Plant Development
BIOD19H3 Epigenetics in Health and Disease
BIOD23H3 Special Topics in Cell Biology
BIOD25H3 Genomics
BIOD21H3 Advanced Molecular Biology Laboratory
BIOD22H3 Molecular Biology of the Stress Response

0.5 Credit of Advanced Courses in Organismal Biology
Choose from:
BIOC21H3 Vertebrate Histology: Cells and Tissues
(BGYC22H3) Vertebrate Histology: Organs
ANTD22H3 Theory and Methodology in Primatology
ANTC68H3 Deconstructing Epidemics
EESC30H3 Microbial Biogeochemistry
BIOC37H3 Comparative Plant Form and Function
BIOD38H3 Plants and Society
BIOD17H3 Seminars in Cellular Microbiology
BIOD26H3 Fungal Biology and Pathogenesis
BIOD33H3 Comparative Animal Physiology
BIOD37H3 Biology of Plant Stress
BIOD45H3 Animal Communication
BIOD48H3 Ornithology and Herpetology
BIOD53H3 Special Topics in Behavioural Ecology

3.0 Credits of Additional C- or D-Level Biology Courses
Choose from:
Any BIO (or formerly BGY) C- or D-level courses offered by the department.
Note: that this includes the Biology Team Research, Supervised Studies and Directed Research courses (BIOC99H3, BIOD95H3, BIOD98Y3 and BIOD99Y3).
Note: that NROC34H3 (Neuroethology), EESC04H3 (Biodiversity and Biogeography) and EESC30H3 (Microbial Biogeochemistry) may also be used toward fulfilling this requirement, if not already used toward fulfilling one of the other requirements above.

B. Routes to Specialisation (optional)
A key advantage of the specialist program in Integrative Biology is the ability for students to readily specialise in areas of particular interest. Please note that students are not required to follow any of these suggested routes. They are provided for guidance only.

• For students with a particular interest in "The Impact of Environment and Climate Change on the Biology of Ecosystems", you should consider including some or all of the following courses in your program: BIOB52H3 (Ecology and Evolutionary Biology Lab), BIOC52H3 (Ecology Field Course), BIOC58H3 (Biological Consequences of Global Change), BIOC59H3 (Advanced Population Ecology), BIOC61H3 (Community Ecology and Environmental Biology) and BIOC67H3 (Inter-University Biology Field Course).

• For students with a particular interest in "The Conservation and Biodiversity of Organisms", you should consider including some or all of the following courses in your program: BIOB52H3 (Ecology and Evolutionary Biology Lab), BIOC52H3 (Ecology Field Course), BIOC58H3 (Biological Consequences of Global Change), BIOC59H3 (Advanced Population Ecology), BIOC61H3 (Community Ecology and Environmental Biology) and BIOC67H3 (Inter-University Biology Field Course).

• For students with a particular interest in "Animal Physiology", you should consider including some or all of the following courses in your program: BIOB32H3 (Animal Physiology Laboratory), BIOC32H3 (Human Physiology I), BIOC33H3 or BIOC34H3 (Human Physiology II), BIOD29H3 (Pathobiology of Human Disease), BIOD33H3 (Comparative Animal Physiology) & BIOD43H3 (Animal Movement and Exercise).

• For students with a particular interest in "Ecophysiology", you should consider including some or all of the following courses in your program: BIOC65H3 (Environmental Toxicology), EESC30H3 (Microbial Biogeochemistry), BIOD33H3 (Comparative Animal Physiology) & BIOD37H3 (Biology of Plant Stress).

For students with a particular interest in "Infection and Disease" or "clinically-oriented topics", you should consider including some or all of the following courses in your program: ANTC67H3 (Foundations of Epidemiology) or ANTC68H3 (Deconstructing Epidemics), BIOB33H3 (Human Development and Anatomy), BIOC21H3 (Vertebrate Histology: Cells and Tissues) BIOC33H3 or
For students with a particular interest in "Plant and Microbial Biology", you should consider including some or all of the following courses in your program: BIOC31H3 (Molecular Aspects of Plant Development), EESC30H3 (Microbial Biogeochemistry), BIOD17H3 (Seminars in Cellular Microbiology), BIOC12H3 (Biochemistry I: Proteins and Enzymes), BIOC13H3 (Biochemistry II: Bioenergetics and Metabolism), BIOC16H3 (Evolutionary Genetics and Genomics), BIOC19H3 (Animal Developmental Biology), BIOC23H3 (Practical Approaches to Biochemistry), BIOC31H3 (Molecular Aspects of Plant Development), BIOC33H3 (Human Physiology II: Lecture and Laboratory), or BIOC34H3 (Human Physiology II: Lecture), BIOD21H3 (Advanced Molecular Biology Laboratory), BIOD22H3 (Molecular Biology of the Stress Response), BIOD23H3 (Special Topics in Cell Biology) & BIOD25H3 (Genomics).

For students with a particular interest in "Behavioural Biology" you should consider including some or all of the following courses in your program: BIOD45H3 (Animal Communication), BIOD53H3 (Special Topics in Behavioural Ecology), NROC34H3 (Neuroethology) & NROC61H3 (Learning and Motivation).

For students with a particular interest in "Behavioural Genetics", you should consider including some or all of the following courses in your program: BIOC16H3 (Evolutionary Genetics and Genomics), NROC34H3 (Neuroethology), BIOD53H3 (Special Topics in Behavioural Ecology), BIOD23H3 (Special Topics in Cell Biology), BIOD25H3 (Genomics), BIOD21H3 (Advanced Molecular Biology Laboratory), BIOD22H3 (Molecular Biology of the Stress Response) & BIOD45H3 (Animal Communication).

For students with a particular interest in "The Evolution of Development" (a.k.a. "evo/devo"), you should consider including some or all of the following courses in your program: BIOC12H3 (Biochemistry I: Proteins and Enzymes), BIOC13H3 (Biochemistry II: Bioenergetics and Metabolism), BIOC16H3 (Evolutionary Genetics and Genomics), BIOC19H3 (Animal Developmental Biology), BIOC23H3 (Practical Approaches to Biochemistry), BIOC31H3 (Molecular Aspects of Plant Development), BIOC33H3 (Human Physiology II: Lecture and Laboratory), or BIOC34H3 (Human Physiology II: Lecture), BIOD21H3 (Advanced Molecular Biology Laboratory), BIOD22H3 (Molecular Biology of the Stress Response), BIOD23H3 (Special Topics in Cell Biology) & BIOD25H3 (Genomics).

C. Complementary Elective Courses (optional)
When selecting electives, students may wish to consider the following courses that may be complementary to their program. However, keep in mind that minimum breadth requirements must be met to complete a degree.

ANTC11H3 Culture, Science and Biotechnology: Redefining the "Natural" Order of Things
ANTC17H3 Human Origins: New Discoveries
ANTC23H3 Primate Sexuality
ANTC41H3 Environmental Stress, Culture and Human Adaptability
ANTC47H3 Human and Primate Comparative Osteology
ANTC48H3 Advanced Topics in Human Osteology
ANTC61H3 Medical Anthropology: Illness and Healing in Cultural Perspective
ANTC62H3 Medical Anthropology: Biological and Demographic Perspectives
ANTD16H3 Biomedical Anthropology
ANTD17H3 Medical Osteology, Public Health Perspectives on Human Skeletal Health
ANTD25H3 Medical Primatology: Public Health Perspectives on Zoonotic Diseases
CHMC47H3 Bio-Organic Chemistry
EESB16H3 Feeding Humans - The Cost to the Planet
HISC03H3 History of Animals and People
HLTC03H3 Politics of Canadian Health Studies
IEEC03H3 History of Animals and People
(IEEC04H3) Defining the Human II
NROC61H3 Learning and Motivation
NROC63H3 Neuroscience Laboratory
NROC64H3 Sensory and Motor Systems
NROC69H3 Synaptic Organization and Physiology of the Brain
NROD63H3 Advanced Neuroscience Laboratory
PHLB09H3 Biomedical Ethics
POLC53H3 Canadian Environmental Politics
PSYC62H3 Drugs and the Brain
PSYD26H3 Genes, Brain and the Development of Mind
STAC52H3 Experimental Design

MAJOR PROGRAM IN BIODIVERSITY, ECOLOGY AND EVOLUTION (SCIENCE)
Supervisor: M. Andrade E-mail: biodiversity@utsc.utoronto.ca
This program provides background and training in modern biological approaches to the study of biodiversity, ecology, and evolution. The links between these fields are emphasized, and topics covered range from the structure and function of ecosystems to the evolution of behaviour, morphology, and physiology.
Program Requirements
This program consists of 8.5 required credits. To complete their degree, students should combine this major program with another major program, or two minor programs, from disciplines outside of biology. Note however that this program cannot be combined with the major program in Human Biology, the major program in Biology or the minor program in Biology. When selecting their course of studies, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).

First Year
1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit in Chemistry
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

0.5 Credit in Mathematics or Statistics
Choose from:
MATA30H3 Calculus I for Biological and Physical Sciences
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Second Year
3.0 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB31H3 Plant Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

0.5 Credit of the Ecology & Evolution Core Lab
BIOB52H3 Ecology and Evolutionary Biology Laboratory

Third Year
1.0 Credit of Ecology & Evolution Foundation Courses
Choose from:
BIOC16H3 Evolutionary Genetics and Genomics
BIOC50H3 Macroevolution
BIOC59H3 Advanced Population Ecology
BIOC61H3 Community Ecology and Environmental Biology

1.0 Credit of Other C-level Courses
Choose from:
BIOC37H3 Comparative Plant Form and Function
BIOC38H3 Plants and Society
BIOC51H3 Tropical Biodiversity Field Course
BIOC52H3 Ecology Field Course
BIOC54H3 Animal Behaviour
BIOC58H3 Biological Consequences of Global Change
BIOC62H3 Role of Zoos in Conservation
BIOC63H3 Conservation Biology
BIOC65H3 Environmental Toxicology
BIOC67H3 Inter-University Biology Field Course
EESC30H3 Microbial Biogeochemistry

Fourth Year
0.5 Credit of D-level Courses
Choose from:
BIOD25H3 Genomics
BIOD26H3 Fungal Biology & Pathogenesis
BIOD33H3 Comparative Animal Physiology
BIOD43H3 Animal Movement and Exercise
BIOD45H3 Animal Communication
BIOD48H3 Ornithology and Herpetology
BIOD52H3 Special Topics in Biodiversity and Systematics
BIOD53H3 Special Topics in Behavioural Ecology  
BIOD60H3 Spatial Ecology  
BIOD62H3 Species and Speciation  
BIOD66H3 Causes & Consequences of Biodiversity  
EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments

**MAJOR PROGRAM IN BIOLOGY (SCIENCE)**  
*Supervisor: K. Persaud*  
*Email: biology-major@utsc.utoronto.ca*

Biology is the study of life and this major program in Biology is meant to provide students with a solid basic knowledge of this vast discipline, while also allowing the student to tailor their program in the upper years toward one or more of biology's many sub-disciplines. Many of the world’s most important and timely issues (medical science and disease, conservation and biodiversity, food and energy supplies) are issues that require citizens to have a firm understanding of biological principles and practices.

**Program Requirements**  
This program consists of 8.0 required credits. To complete their degree, students should combine this major program with another major program, or two minor programs, from disciplines outside of biology. When selecting their course of studies, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).

**First Year**  
1.0 Credit of Introductory Biology Courses  
BIOA01H3 Life on Earth: Unifying Principles  
BIOA02H3 Life on Earth: Form, Function and Interactions  
1.0 Credit in Introductory Chemistry Courses  
CHMA10H3 Introductory Chemistry I: Structure and Bonding  
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms  
0.5 Credit in Mathematics or Statistics  
Choose from:  
MATA30H3 Calculus I for Biological and Physical Sciences  
STAB22H3 Statistics I (this course could also be taken in second year)  
PSYB07H3 Data Analysis in Psychology (this course could also be taken in second year)

**Second Year**  
3.0 Credits of Biology Core Courses  
BIOB10H3 Cell Biology  
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes  
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology  
BIOB31H3 Plant Physiology  
BIOB50H3 Ecology  
BIOB51H3 Evolutionary Biology  
0.5 Credit of Biology Core Labs  
Choose from:  
BIOB12H3 Cell and Molecular Biology Laboratory  
BIOB32H3 Animal Physiology Laboratory  
BIOB33H3 Human Development and Anatomy Laboratory  
BIOB52H3 Ecology and Evolutionary Biology Laboratory

**Third Year**  
1.5 Credits of Additional C-level Biology Courses  
Choose from:  
Any BIO C-level courses offered by the department.  
**Note:** that NROC34H3 (Neuroethology), EESC04H3 (Biodiversity and Biogeography) and EESC30H3 (Microbial Biogeochemistry) may also be used toward fulfilling this requirement.

**Fourth Year**  
0.5 Credit of Additional D-Level Biology Courses  
Choose from:  
Any BIO D-level courses offered by the department. **Note:** This includes the Biology Supervised Studies and Directed Research courses (BIOD95H3, BIOD98Y3 & BIOD99Y3)

**MAJOR PROGRAM IN HUMAN BIOLOGY (SCIENCE)**  
*Supervisor: A. Ashok*  
*Email: human-biology@utsc.utoronto.ca*

The Human Biology major program provides training and background in general biology with the opportunity to concentrate on courses in upper years that are related to human health. Upper year courses are available in physiology, cell and molecular biology,
anatomy, microbiology, pathology, endocrinology, anthropology, psychology and biochemistry. This program is suitable for students with an interest in applied biology in health sciences or in social sciences related to human health.

Program Requirements:
This program consists of 8.5 credits. To complete their degree, students should combine this major program with another major program, or two minor programs, from disciplines outside of biology. When selecting their course of studies, students should refer to the University of Toronto guidelines for program breadth and depth (see Degree Requirements).

Required Courses and Suggested Course Sequence

First Year

1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

1.0 Credit in Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit in Introductory Psychology Courses
PSYA01H3 Introductory Psychology: Part I
PSYA02H3 Introductory Psychology: Part II

0.5 Credit in Calculus or Statistics
Choose From:
MATA30H3 Calculus I for Biological and Physical Sciences
STAB22H3 Statistics I
PSYB07H3 Data Analysis in Psychology

Second Year

2.5 Credits of Biology Core Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB50H3 Ecology
BIOB51H3 Evolutionary Biology

0.5 Credit in a Biology Core Lab
BIOB33H3 Human Development and Anatomy

Third/Fourth Years

1.5 Credits of Additional C-Level Courses
Choose From:
BIOC14H3 Genes, Environment and Behaviour
BIOC15H3 Genetics
BIOC16H3 Evolutionary Genetics and Genomics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC19H3 Animal Developmental Biology
BIOC21H3 Vertebrate Histology: Cells and Tissues
BIOC32H3 Human Physiology I
BIOC33H3 Human Physiology II: Lecture and Laboratory or BIOC34H3 Human Physiology II: Lecture
BIOC58H3 Biological Consequences of Global Change
BIOC65H3 Environmental Toxicology
NROC61H3 Learning and Motivation
NROC64H3 Sensory and Motor Systems
NROC69H3 Synaptic Organisation and Physiology of the Brain

0.5 Credit of Additional D-Level Biology Courses
Choose From:
BIOD17H3 Seminars in Cellular Microbiology
BIOD19H3 Epigenetics in Health and Disease
BIOD26H3 Fungal Biology and Pathogenesis
BIOD29H3 Pathobiology of Human Disease
BIOD33H3 Comparative Animal Physiology
BIOD43H3 Animal Movement and Exercise
BIOD65H3 Pathologies of the Nervous System
MINOR PROGRAM IN BIOLOGY (SCIENCE)

Supervisor: K. Persaud  Email: biology-minor@utsc.utoronto.ca

Program Requirements
This program must include one credit of the introductory biology courses (BIOA01H3 & BIOA02H3) plus 3.0 other credits in Biology, of which at least one credit must be at the C- or D-level.

Note: that NROC34H3 (Neuroethology), EESC04H3 (Biodiversity and Biogeography) and EESC30H3 (Microbial Biogeochemistry) may also be used toward fulfilling this requirement.

SPECIALIST (JOINT) PROGRAM IN APPLIED MICROBIOLOGY (SCIENCE)
See the Applied Microbiology section of this Calendar for program requirements.

SPECIALIST (JOINT) PROGRAM IN PARAMEDICINE (SCIENCE)
See the Paramedicine section of this Calendar for program requirements.

OTHER PROGRAMS WITH BIOLOGY CONTENT
Note that Biological Sciences courses are also used to fulfill some requirements in the following major or specialist programs: Biochemistry, Biological Chemistry, Environmental Science, Health Studies, Natural Sciences and Neuroscience. Please see the detailed program descriptions elsewhere in this calendar.

IMPORTANT NOTE ABOUT BIOLOGICAL SCIENCES COURSE CODES
Effective 2010/2011, the first three characters of Biological Sciences course codes have changed from BGY to BIO. The rest of the code remains the same. For example, BIOA01H3 is the new equivalent of the former BGYA01H3.

BIOA01H3 Life on Earth: Unifying Principles
A lecture and laboratory course providing an overview of the origins and cellular basis of life, genetics and molecular biology, evolution and the diversity of microorganisms. Note: that both BIOA01H3 and BIOA02H3 must be completed prior to taking any other Biology course.
Exclusion: BIO120H, BIO130H, (BIO150Y), (BGYA01H3)
Breadth Requirement: Natural Sciences

BIOA02H3 Life on Earth: Form, Function and Interactions
A lecture and laboratory course providing an overview of the anatomy and physiology of plants and animals, population biology, ecology and biodiversity. Note that both BIOA01H3 and BIOA02H3 must be completed prior to taking any other Biology course.
Prerequisite or Corequisite: BIOA01H3
Exclusion: BIO120H, BIO130H, (BIO150Y), (BGYA01H3)
Breadth Requirement: Natural Sciences

BIOB10H3 Cell Biology
This course is designed to introduce theory and modern experimental techniques in cell and molecular genetics. Emphasis will be on eukaryotic cells. First half topics include: Structure and function of major animal and plant organelles, the role of the cytoskeleton, the role of the plasma membrane and extracellular matrix in the context of cellular interactions with the environment. In the second half of the course topics will include structure and function of the nucleus, DNA replication and cell cycle control, transcription and translation, gene regulation, signal transduction and basic aspects of immunology. Please note this course contains the content of both BIOB10H3 and BIOB11H3.
Prerequisite: BIOA01H3 & BIOA02H3 & CHMA10H3 & CHMA11H3
Breadth Requirement: Natural Sciences

BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
A course focusing on the central dogma of genetics and how molecular techniques are used to investigate cellular processes. Topics include structure and function of the nucleus, DNA replication and cell cycle control, transcription and translation, gene regulation and signal transduction.
Prerequisite: BIOB10H3
Breadth Requirement: Natural Sciences

BIOB12H3 Cell and Molecular Biology Laboratory
A practical introduction to experimentation in cell and molecular biology. Six modules will introduce students to concepts and techniques in the general preparation of solutions.
and buffers, microbiology, molecular biology, biochemistry, microscopy and data manipulation and communication skills. This core laboratory course is the gateway for Cell & Molecular biology specialists to upper level laboratory offerings.

**Prerequisite:** CHMA10H3 & CHMA11H3

**Corequisite:** BIOB11H3 or BIOB10Y3

**Exclusion:** BIO215H1, (BGYB12H3)

**Enrolment Limits:** Priority will be given to students enrolled in the specialist programs in Applied Microbiology, Cell and Molecular Biology (Co-op and non-Co-op), Biological Chemistry and the major program in Biochemistry. Additional students will be admitted as space permits.

**Breadth Requirement:** Natural Sciences

**BIOB31H3 Plant Physiology**

An introduction to plant biology. Topics include plant and cell structure, water balance, nutrition, transport processes at the cell and whole plant level, physiological and biochemical aspects of photosynthesis, and growth and development in response to hormonal and environmental cues.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Exclusion:** BIO251Y, (BOT251Y), (BGYB31H3)

**Breadth Requirement:** Natural Sciences

**BIOB32H3 Animal Physiology Laboratory**

This course examines physiological mechanisms that control and co-ordinate the function of various systems within the body. The laboratory exercises examine properties of digestive enzymes, characteristics of blood, pharmacological regulation of heart rate, kidney function, nerve function and action potentials, synaptic transmission, skeletal muscle function and mechanoreception.

**Corequisite:** (BIOB30H3) or BIOB34H3

**Exclusion:** (BGYB32H3), BIO252Y, BIO270H, BIO271H, (ZOO252Y)

**Breadth Requirement:** Natural Sciences

**BIOB33H3 Human Development and Anatomy**

A lecture and laboratory course which deals with the functional morphology of the human organism. The subject matter extends from early embryo-genesis through puberty to late adult life. Priority will be given to students in the Human Biology and Paramedicine programs. Additional students will be admitted as space permits.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Exclusion:** ANA300Y, ANA301H, (BGYB33H3)

**Breadth Requirement:** Natural Sciences

**BIOB34H3 Animal Physiology**

A comparative animal physiology course covering regulatory and control mechanisms such as: homeostasis; metabolism and energetics; excretion and osmoregulation; feeding and digestion; muscles and locomotion; nervous systems.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Exclusion:** (BIOB30H3), (BGYB30H3), BIO270H, BIO204H

**Breadth Requirement:** Natural Sciences

**BIOB50H3 Ecology**

An introduction to the main principles of ecology, the science of the interactions of organisms with each other and with their environment. The course covers community and population ecology, and provides an emphasis on how ecology relates to other areas of biology, and to contemporary human and environmental issues.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Exclusion:** (BGYB50H3)

**Breadth Requirement:** Natural Sciences

**BIOB51H3 Evolutionary Biology**

Students learn about development of evolutionary theory, maintenance of genetic variation, mechanisms of evolutionary change, adaptation, and current research topics in evolution.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Exclusion:** (BGYB51H3)

**Breadth Requirement:** Natural Sciences

**BIOB52H3 Ecology and Evolutionary Biology Laboratory**

An introduction to field, lab and computational approaches to ecology and evolution. Laboratories will explore a variety of topics, ranging from population genetics to community ecology and biodiversity. Some lab exercises will involve outdoor field work.

**Prerequisite:** BIOA01H3 & BIOA02H3

**Corequisite:** BIOB51H3

**Exclusion:** (BGYB52H3)

**Breadth Requirement:** Natural Sciences

**BIOB98H3 Supervised Introductory Research in Biology**

A course designed to facilitate introduction to, and experience in, ongoing laboratory or field research in biology. Supervision of the work is arranged by mutual agreement between student and instructor. Students must obtain a permission form from SW420B that is to be completed and signed by the student and supervisor (and which will include an outline of the work to be completed) and then returned to SW420B. **Note:** This course DOES NOT satisfy any Biological Sciences program requirements. **Note:** This course is a credit/no credit course.

**Prerequisite:** At least 4.0 credits including BIOA01H3 & BIOA02H3 & enrolment in a Biology program.

**Exclusion:** BIOA01H3 & BIOA02H3 & enrolment in a Biology program.

**Exclusion:** BIOB98H3 may not be taken after or concurrently with BIOB99H3, BIOD95H3, BIOD98Y3 or BIOD99Y3.

**BIOB99H3 Supervised Introductory Research in Biology**

A course designed to facilitate introduction to, and experience in, ongoing laboratory or field research in biology. Supervision of the work is arranged by mutual agreement between student and instructor. Students must obtain a permission form from SW420B that is to be completed and signed by the student and supervisor (and which will include an outline of the work to be completed) and then returned to SW420B. **Note:** This course does not satisfy any Biological Sciences program requirements.
This class will provide an overview of the role of genes in humans, and studies of gene-environment interactions. Examples of genetic effects on behaviour in animals and are methods to investigate complex behaviours, specific participants in behavioural regulation. Topics to be covered include the relationship of mutation to genetic disease and evolution; genetic dissection of biological processes; genetic technologies and genomic approaches.

**Prerequisite:** BIOB10H3 & BIOB11H3 or BIOB10Y3
**Exclusion:** BIOB98H3 or BIOB99Y3.

**BIOC10H3 Cell Biology: Intracellular Compartments and Protein Sorting**

This course builds on fundamental cell biological concepts using primary literature. The course will examine specific organelles and their functions in protein biogenesis, modification, trafficking, and quality control within eukaryotic cells. The experimental basis of knowledge will be emphasized and students will be introduced to hypothesis driven research in cell biology.

**Prerequisite:** [BIOC10H3 & BIOB11H3] or BIOB10Y3
**Exclusion:** CSB331H, CSB428H, BIO315H
**Recommended Preparation:** BIOC12H3

**BIOC12H3 Biochemistry I: Proteins & Enzymes**

A lecture course describing factors involved in determining protein structure and the relationships between protein structure and function. Topics will include: amino acids; the primary, secondary, tertiary and quaternary structures of proteins; protein motifs and protein domains; glycoproteins; membrane proteins; classical enzyme kinetics and allosteric enzymes; mechanisms of enzyme action.

**Prerequisite:** [BIOC10H3 & BIOB11H3] or BIOB10Y3 & CHMB41H3 & CHMB42H3
**Exclusion:** BCH210H, BCH242Y, BCH310H, (BGYC12H3)
**Enrolment Limit:** 50
**Breadth Requirement:** Natural Sciences

**BIOC13H3 Biochemistry II: Bioenergetics and Metabolism**

A lecture course that introduces cellular metabolism, the process by which living organisms extract and utilize energy from their environment. Topics include: bioenergetics; oxidative phosphorylation; aspects of carbohydrate, lipid and amino acid metabolism; regulation of metabolism; and, the integration of metabolic pathways.

**Prerequisite:** [BIOC10H3 & BIOB11H3] or BIOB10Y3 & CHMB41H3 & CHMB42H3
**Exclusion:** BCH210H, BCH242Y, BCH310H, (BGYC12H3)
**Breadth Requirement:** Natural Sciences

**BIOC14H3 Genes, Environment and Behaviour**

This class will provide an overview of the role of genes in behaviour, either indirectly as structural elements or as direct participants in behavioural regulation. Topics to be covered are methods to investigate complex behaviours, specific examples of genetic effects on behaviour in animals and humans, and studies of gene-environment interactions.

**Prerequisite:** BIOB11H3 or BIOB10Y3
**Breadth Requirement:** Natural Sciences

**BIOC15H3 Genetics**

Topics for this lecture and laboratory (or project) course include: a brief review of DNA structure, transcription, and translation; inheritance and its chromosomal basis; gene interactions; sources and types of mutations and the relationship of mutation to genetic disease and evolution; genetic dissection of biological processes; genetic technologies and genomic approaches.

**Prerequisite:** [BIOC10H3 & BIOB11H3] or BIOB10Y3 & [MATA21H3] or MATA35H3 or MATA36H3 or MATA37H3 or PSYB07H3 or STAB22H3
**Exclusion:** (BGYC15H3), BIO260H, HMB265H
**Breadth Requirement:** Natural Sciences

**BIOC16H3 Evolutionary Genetics and Genomics**

This course will discuss modern genetic and genomic techniques used to understand the maintenance of genetic variation in nature. Topics include DNA sequence evolution, molecular phylogenetics, methods of detecting selection, sequence alignments, and comparative genomics.

**Prerequisite:** BIOB51H3
**Exclusion:** (BGYC16H3)
**Recommended Preparation:** BIOC15H3

**BIOC17H3 Microbiology: The Bacterial Cell**

This course presents an overview of the microbial world and introduces the students, in more detail, to the physiological, cellular and molecular aspects of bacteria. The laboratories illustrate principles and provide training in basic microbiological techniques essential to microbiology and to any field where recombinant DNA technology is used.

**Prerequisite:** [(BIOC10H3 & BIOB11H3) or BIOB10Y3] & [one of BIOB12H3 or BIOB32H or BIOB33H or BIOB52H3]
**Exclusion:** (BGYC17H3), MGY377H, (MBY377H)
**Breadth Requirement:** Natural Sciences

**BIOC19H3 Animal Developmental Biology**

Following a discussion of cellular and molecular events in early embryonic life, the development of several model systems will be analyzed such as erythropoiesis, lens development in the eye, spermatogenesis and myogenesis. Particular reference will be given to the concept that regulation of gene expression is fundamental to development.

**Prerequisite:** [(BIOC10H3 & BIOB11H3) or BIOB10Y3]
**Exclusion:** (BGYC19H3), CSB328H
**Breadth Requirement:** Natural Sciences

**BIOC21H3 Vertebrate Histology: Cells and Tissues**

A study of the structure of cells and the various tissue types which make up the vertebrate body; epithelial, connective, muscle, nervous, blood, and lymphatic. Emphasis is placed on how form is influenced by function of the cells and tissues.

**Prerequisite:** [BIOC10H3 or BIOB10Y3] or BIOB30H3 or BIOB34H3
**Exclusion:** ANA300Y, (BGYC21H3)

**BIOC22H3 Practical Approaches to Biochemistry**

A lecture and laboratory course that introduces students to experimental approaches used in biochemical research. Topics include practical and theoretical aspects of: spectrophotometry; chromatography; electrophoresis; radioisotopes; enzyme assays, protein purification and approaches to identify protein-protein interactions. Students will be expected to solve numerical problems involving these related procedures.

**Prerequisite:** BIOB12H3 & BIOC12H3
BIOC31H3  Molecular Aspects of Plant Development
A lecture course focused on molecular mechanisms of plant development covering a range of subjects including but not limited to: Embryogenesis, seed development and germination. Plant hormones: hormone perception, signal transduction pathways and mutant analysis. Molecular control of vegetative development: meristem identity, function and regulation. Flowering time: the floral model and homeotic mutations.
Prerequisite: [(BIOB10H3 & BIOB11H3) or BIOB10Y3] & BIOB31H3
Exclusion: CSB340H, (BOT340H), (BGYC31H3)
Breadth Requirement: Natural Sciences

BIOC32H3  Human Physiology I
An introduction to Human Physiology covering the function of neurons, the brain, hormones and our immune systems in both the healthy and diseased states.
Prerequisite: BIOB33H3 or NROB60H3
Exclusion: (BIOB30H3), PSL300H
Breadth Requirement: Natural Sciences

BIOC33H3  Human Physiology II: Lecture and Laboratory
This course will cover the physiology of the human respiratory, cardiovascular, renal and digestive systems. Topics include cardiac function, ECG, blood flow/pressure regulation, pulmonary mechanics, gas transfer and transport, the control of breathing, sleep-related breathing disorders, kidney function, ion regulation, water balance, acid-base balance and digestive function/regulation.
Prerequisite: (BIOB30H3) or BIOB34H3 or NROB60H3
Exclusion: BIOC34H3, (BGYC33H3), (BGYC34H3), PSL201Y, PSL301H, PSL302Y
Enrolment Limits: Priority will be given to students enrolled in the Human Biology and Paramedicine programs. Additional students will be admitted only if space permits.
Breadth Requirement: Natural Sciences

BIOC34H3  Human Physiology II: Lecture
The lecture component of BIOC34H3 is identical to that described above for BIOC33H3. Students will complete a series of computer-simulated laboratory exercises (on their own time) instead of practical lab sessions.
Prerequisite: (BIOB30H3) or BIOB34H3 or NROB60H3
Exclusion: BIOC33H3, (BGYC33H3), (BGYC34H3), PSL201Y, PSL301H, PSL302Y
Enrolment Limits: 15
Breadth Requirement: Natural Sciences

BIOC37H3  Comparative Plant Form and Function
Plants have evolved organs adapted to maximize growth, survival and reproduction under various environmental conditions. This course will study plant structures in a comparative way with respect to both form and function of growth and sex, focusing mainly on the anatomy of flowering plants.
Prerequisite: BIOB31H3
Exclusion: EEB340H
Enrolment Limits: 48
Breadth Requirement: Natural Sciences

BIOC38H3  Plants and Society
How do plants feed the human population? Students will learn how plants grow and function and how the environment affects plant growth. Human population levels are at 6.5 billion, but it will climb to approximately 10 billion in 2050. This increase in population will tax our planet’s ability to sustain life as we know it. Environmental sustainability and food production will be also this course’s themes.
Prerequisite: BIOB31H3
Exclusion: EEB202H, EESB16H3
Enrolment Limits: 48
Breadth Requirement: Natural Sciences

BIOC39H3  Immunology
This course introduces the molecular and cellular basis of the immune system. Topics include self versus non-self recognition, humoral and cell-mediated immune responses, and the structure and function of antibodies. The importance of the immune system in health and disease will be emphasized and topics will include vaccination, autoimmunity, and tumour immunology.
Prerequisite: [(BIOB10H3 & BIOB11H3) or BIOB10Y3]
Exclusions: IMM334Y, IMM335Y
Breadth Requirement: Natural Sciences

BIOC50H3  Microevolution
An overview of recent developments in evolutionary biology that focus on large-scale patterns and processes of evolution. Areas of emphasis may include the evolutionary history of life on earth, phylogenetic reconstruction, patterns of diversification and extinction in the fossil record, the geography of evolution, the evolution of biodiversity, and the process of speciation.
Prerequisite: BIOB50H3 & BIOB51H3
Exclusion: EEB362H
Breadth Requirement: Natural Sciences

BIOC51H3  Tropical Biodiversity Field Course
A course with preparatory lectures at UTSC and 1 week at a tropical field station. Ecological and evolutionary aspects of tropical biodiversity will be explored. Students must contact the instructor by September to enrol in this course.
Prerequisite: BIOB50H3, BIOB51H3, BIOB52H3 & permission of instructor. Note: Interested students should contact the instructor 4 months before the start of the course, and must be able to place a deposit towards the cost of airfare and accommodation.
Exclusion: (BGYC51H3),(BGYC53H3)
Enrolment Limits: 15
Breadth Requirement: Natural Sciences

BIOC52H3  Ecology Field Course
Opportunity to experience hands-on learning through informal natural history walks, group projects, research projects in a small-class setting. The course covers basic principles and selected techniques of field ecology. The study of a variety of topics in population and community ecology, plant-animal interactions. Mandatory: occasional weekend field trips.
Prerequisite: BIOB50H3 & BIOB51H3
Exclusion: EEB305H, (BGYC52H3), (BIO305H)
Enrolment Limits: 15
Breadth Requirement: Natural Sciences
BIOC54H3 Animal Behaviour  
Survey of the study of animal behaviour, emphasis on understanding behavioural patterns in the context of evolutionary theory. Topics include sexual selection, parental care, social behaviour, conflict and hypothesis testing in behavioural research.  
Prerequisite: BIOB50H3 & BIOB51H3  
Exclusion: EEB322H, (BGYC54H3), (ZOO322H)  
Breadth Requirement: Natural Sciences

BIOC58H3 Biological Consequences of Global Change  
A lecture and tutorial course that addresses the key environmental factor that will dominate the 21st Century and life on the planet: Global Climate Change. The course will examine the factors that influence climate, from the formation of the earth to the present time, how human activities are driving current and future change, and how organisms, populations, and ecosystems are and will respond to this change. Finally, it will cover human responses and policies that can permit an adaptive response to this change.  
Prerequisite: BIOB50H3 & BIOB51H3  
Exclusion: EEB428H, GGR314H, (BGYC58H3), (BIO428H)  
Breadth Requirement: Natural Sciences

BIOC59H3 Advanced Population Ecology  
The study of the interactions that determine the distribution and abundance of organisms on the earth. The topics will include an understanding of organism abundance and the factors that act here: population parameters, demographic techniques, population growth, species interactions (competition, predation, herbivory, disease), and population regulation. It will include an understanding of organism distribution and the factors that act here: dispersal, habitat selection, species interactions, and physical factors.  
Prerequisite: BIOB50H3 & BIOB51H3 & BIOB52H3  
Exclusion: EEB319H, (BGYC59H3), (BIO319H)  
Breadth Requirement: Natural Sciences

BIOC61H3 Community Ecology and Environmental Biology  
An examination of the theory and methodology of community analysis, with an emphasis on the factors regulating the development of ecosystems. The application of ecological theory to environmental problems is emphasized. Topics include: succession, primary productivity, nutrient supply, predation, competition, trophic dynamics, stability and disturbance, and effects of global change.  
Prerequisite: BIOB50H3  
Exclusion: EEB321H, (BIO321H), (BGYC61H3)  
Breadth Requirement: Natural Sciences

BIOC62H3 Role of Zoos in Conservation  
A lecture course that examines the changing role of zoos through time, but emphasizing contemporary topics such as: captive breeding and re-introduction of species vs. new technologies to assist reproduction in wild populations; the importance of nutrition and behavioural enrichment in captive animals; zoos and public involvement/education; endangered species in Canada; and habitat restoration.  
Prerequisite: BIOB50H3 & BIOB51H3  
Exclusion: (BGYC62H3)  
Enrollment Limits: 50  
Breadth Requirement: Natural Sciences

BIOC63H3 Conservation Biology  
A lecture and tutorial course offering an introduction to the scientific foundation and practice of conservation biology. It reviews ecological and genetic concepts constituting the basis for conservation including patterns and causes of global biodiversity, the intrinsic and extrinsic value of biodiversity, the main causes of the worldwide decline of biodiversity and the approaches to save it.  
Prerequisite: BIOB50H3 & BIOB51H3  
Exclusion: EEB365H, (BGYC63H3), (BIO365H)  
Breadth Requirement: Natural Sciences

BIOC65H3 Environmental Toxicology  
An introduction to the scientific study of the effects of toxic chemicals on biological organisms. Standard methods of assessing toxicant effects on individuals, populations, and communities are discussed. Special emphasis is placed on the chemistry of major toxicant classes, and on how toxicants are processed by the human body.  
Prerequisite: BIOB50H3 & CHMA10H3 & CHMA11H3  
Exclusion: (BGYC65H3)  
Breadth Requirement: Natural Sciences

BIOC67H3 Inter-University Biology Field Course  
Field courses offered by the Ontario Universities Program in Field Biology (OUPFB) in a variety of habitats and countries, usually during the summer. OUPFB modules (courses) are posted online in January, and students must apply by the indicated deadline. Additional information is provided on the Department of Biological Sciences website http://www.utsc.utoronto.ca/~biosci/researchOpp.html  
Prerequisite: Varies by module (Permission of course coordinator required)  
Exclusion: (BGYC67H3)  
Breadth Requirement: Natural Sciences

BIOC99H3 Biology Team Research  
This course is meant to provide an introduction to academic research. A group of 3-5 students work together to develop a research proposal and/or implement a research project under the general guidance of a faculty researcher. Students meet regularly with a graduate student and attend several skill development sessions. Components of assessment are determined prior to project commencement, but may be based on student contribution over the term and a final written product.  
Prerequisite: (1) Enrolment in a UTSC major or specialist Subject POSI offered by Biological Sciences & (2) have completed all second year core program requirements & (3) have at least 10 full credits & (4) a cumulative GPA of at least 3.0 (5) acceptance of the application by a faculty member (The application form may be downloaded from the website, http://www.utsc.utoronto.ca/~biosci/researchOpp.htm)  
Breadth Requirement: Natural Sciences

BIOD17H3 Seminars in Cellular Microbiology  
An overview of the most significant advances in cellular microbiology. Relevant scientific literature will be presented and discussed by the students in class and assignments. The curriculum will include cellular mechanisms of bacterial pathogenesis, invasion and intracellular survival of bacteria, and recognition and elimination of pathogenic bacteria by cells.
Prerequisite: BIOC17H3
Exclusion: (BGYD17H3)
Enrolment Limits: 35
Breadth Requirement: Natural Sciences

**BIOD19H3 Epigenetics in Health and Disease**

A lecture/seminar/discussion class on the emerging field of environmental epigenetics. Course will cover basic epigenetic mechanisms, methods in epigenetic research, epigenetic control of gene function, and the role of epigenetics in normal development and human disease.

Prerequisite: BIOC14H3, BIOC15H3
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD21H3 Advanced Molecular Biology Laboratory**

Applications of molecular technology continue to revolutionize our understanding of all areas of life sciences from biotechnology to human disease. This intensive laboratory, lecture / tutorial course provides students with essential information and practical experience in recombinant DNA technology, molecular biology and bioinformatics.

Prerequisite: BIOC12H3 & BIOC15H3 & [BIOC17H3 or IMCB01H3 & IMCB02H3 (for Applied Microbiology students only)]
Corequisite: BIOC12H3 (Note: Although listed as a corequisite, it is recommended that BIOC12H3 be taken in advance of BIOD21H3.) Exclusion: (BGYD21H3)
Enrolment Limits: 48 *Priority will be given to students enrolled in the specialist programs in Cell and Molecular Biology (Co-op and non-Co-op). Additional students will be admitted only if space permits.
Breadth Requirement: Natural Sciences

**BIOD22H3 Molecular Biology of the Stress Response**

This course is organized around a central theme, namely the expression of heat shock (stress) genes encoding proteins important in cellular repair/protective mechanisms. Topics include heat shock transcription factors, heat shock proteins as "protein repair agents" that correct protein misfolding, and diseases triggered by protein misfolding, such as neurodegenerative disorders.

Prerequisite: BIOC15H3
Exclusion: (BGYD22H3)
Enrolment Limits: 24 *Priority will be given to students enrolled in the specialist programs in Cell and Molecular Biology (Co-op and non-Co-op). Additional students will be admitted as space permits.
Breadth Requirement: Natural Sciences

**BIOD23H3 Special Topics in Cell Biology**

A lecture/seminar/discussion class on contemporary topics in Cell Biology. Students will explore the primary literature becoming familiar with experimental design and methodologies used to decipher cell biology phenomena. Student seminars will follow a series of lectures and journal club discussions.

Prerequisite: BIOC12H3 & BIOC15H3
Exclusion: (BGYD23H3)
Enrolment Limits: 24 *Priority will be given to students enrolled in the specialist programs in Cell and Molecular Biology (Co-op and non-Co-op). Additional students will be admitted as space permits.
Breadth Requirement: Natural Sciences

**BIOD25H3 Genomics**

A course considering the principles of genome organization and the utilization of genomic approaches to studying a wide range of problems in biology. Topics to be presented will include innovations in instrumentation and automation, a survey of genome projects, genomic variation, functional genomics, transcription profiling (microarrays), database mining and extensions to human and animal health and biotechnology.

Prerequisite: BIOC15H3
Corequisite: BIOC13H3 Note: Although listed as a corequisite, it is recommended that BIOC13H3 be taken in advance of BIOD25H3.
Exclusion: (BGYD25H3)
Enrolment Limits: 25
Breadth Requirement: Natural Sciences

**BIOD26H3 Fungal Biology and Pathogenesis**

A lecture and tutorial based course designed to provide an overview of the fungal kingdom and the properties of major fungal pathogens that contribute to disease in animals (including humans) and plants. This course will address the mechanisms and clinical implications of fungal infections and host defence mechanisms. Topics include virulence factors and the treatment and diagnosis of infection.

Prerequisite: BIOC17H3
Enrolment Limits: 50
Breadth Requirement: Natural Sciences

**BIOD27H3 Molecular Endocrinology**

A lecture/seminar/discussion class on contemporary topics in endocrinology. The course provides a basic knowledge of endocrine systems encompassing hormone biosynthesis, metabolism, and physiologic actions. Signal transduction from growth factors and their receptors will be emphasized. Specific topics and advances in hormone and growth factor research will be examined.

Prerequisite: (BIOB30H3) or BIOB34H3 or BIOC32H3 & BIOC12H3
Exclusion: (BGYD27H3)
Recommended Preparation: BIOC33H3 or BIOC34H3
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD29H3 Pathobiology of Human Disease**

This lecture/seminar format course will critically examine selected topics in human disease pathogenesis. Infectious and inherited diseases including those caused by human retroviruses, genetic defects and bioterrorism agents will be explored. Discussions of primary literature will encompass pathogen characteristics, genetic mutations, disease progression and therapeutic strategies.

Corequisite: BIOC17H3
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD33H3 Comparative Animal Physiology**

This course will focus on the comparative aspects of animal physiology and address how various physiological systems are specialised to meet many of the environmental challenges encountered by terrestrial and aquatic environments. Topics include breathing, cardiovascular physiology, nutrition/feeding.
enertgetics, thermal regulation, hibernation and ionic/osmotic regulation.
Prerequisite: BIOC33H3 or BIOC34H3
Exclusion: (BGYD33H3)
Breadth Requirement: Natural Sciences

**BIOD37H3 Biology of Plant Stress**
This course examines resistance mechanisms (anatomical, cellular, biochemical, molecular) allowing plants to avoid or tolerate diverse abiotic and biotic stresses. Topics include: pathogen defence; responses to temperature, light, water and nutrient availability, salinity, and oxygen deficit; stress perception and signal transduction; methods to study stress responses; and strategies to improve stress resistance.
Prerequisite: [[BIOB10H3 & BIOB11H3] or BIOB10Y3] & BIOB31H3
Exclusion: (BGYD37H3)
Enrolment Limits: 35
Breadth Requirement: Natural Sciences

**BIOD43H3 Animal Movement and Exercise**
A lecture and seminar/discussion course covering integrative human and comparative animal exercise physiology. Topics will include muscle physiology, neurophysiology, metabolism, energetics, thermoregulation and biomechanics. These topics will be considered within evolutionary and ecological contexts. Students will be expected to give a brief oral presentation on recently published primary research involving exercise physiology.
Prerequisite: BIOC33H3 or BIOC34H3
Exclusion: HMB472H
Enrolment Limits: 50
Breadth Requirement: Natural Sciences

**BIOD45H3 Animal Communication**
Theoretical and biological aspects of communication in non-human animals; communication behaviour; decision-making and signal design; evolution of communication.
Prerequisite: [[BIOB30H3] or BIOB54H3] & BIOB50H3 & BIOB51H3 & BIOC54H3
Exclusion: (BGYD45H3)
Breadth Requirement: Natural Sciences

**BIOD48H3 Ornithology and Herpetology**
An overview of the evolution, ecology, behaviour, and conservation of amphibians, reptiles, and birds. Field projects and laboratories will emphasize identification of species in Ontario.
Prerequisite: BIOB50H3, BIOB51H3 & one of the following: BIOC50H3; BIOC54H3 or BIOC61H3
Exclusion: EEB386H, EEB384H
Breadth Requirement: Natural Sciences

**BIOD52H3 Special Topics in Biodiversity and Systematics**
A seminar exploration of current topics in biodiversity and systematics, including the molecular genetic, organismal, and community levels. Topics may include DNA barcoding, homology and developmental genetics, adaptive radiations, and morphological vs. molecular systematics. The course is intended to develop ability in critical thinking and interpretation of the primary literature. Coursework will involve class presentations, discussions, and written analyses.
Prerequisite: BIOC50H3
Exclusion: (BGYD52H3)
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD53H3 Special Topics in Behavioural Ecology**
An exploration into current topics in the field of behavioural ecology, the study of the evolutionary and ecological influences on animal behaviour. Topics may include sexual selection and conflict, social behaviour, communication, and behavioural mechanisms. Emphasis will be on current research and the quantitative and qualitative reasoning underlying behavioural ecological theory.
Prerequisite: BIOC54H3
Exclusion: EEB496Y, (BGYD53H3), (BIO496Y)
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD60H3 Spatial Ecology**
The study of how space and scale influence ecological patterns and species coexistence. The course will cover three main topics: 1) spatial dynamics, such as spatial spread and dispersal models; 2) species coexistence with metapopulation/metcocommunity, neutral and lottery models; and 3) spatial analysis of ecological communities. Basic concepts will be applied to ecological problems such as: species invasions, reserve design and understanding threats to island biodiversity. Priority will be given to students enrolled in the specialist program in Biodiversity, Ecology and Evolution.
Prerequisite: BIOB50H3 & STAB22H3 & [BIOC59H3 or BIOC61H3]
Exclusion: (BGYD60H3)
Breadth Requirement: Natural Sciences

**BIOD62H3 Species and Speciation**
Importance of species as the basic unit of evolution and different species concepts. Origin of species: processes of speciation (allopatric, sympatric; chromosomal speciation; speciation through sexual selection); pre-zygotic (habitat/temporal/pollinator/behavioural isolation) vs. post-zygotic speciation (extrinsic and intrinsic post-zygotic isolation); adaptive radiation; different rates of speciationFlipside of speciation: extinction.
Prerequisite: BIOC50H3
Exclusion: EEB340H
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

**BIOD65H3 Pathologies of the Nervous System**
An intensive examination of selected pathologies affecting the nervous system such as Alzheimer’s and Parkinson’s disease, multiple sclerosis, and stroke. These pathologies will be examined from an integrative perspective encompassing the pathogeneses, resulting symptoms, and current therapeutic approaches. This course requires critical examination of research articles.
Prerequisite: [BIOB11H3 or BIOB10Y3] & [one of NROC61H3 or NROC64H3 or NROC69H3]
Exclusion: (BGYD65H3), (NROD65H3)
Enrolment Limits: 30
Breadth Requirement: Natural Sciences
BIOD66H3 Causes and Consequences of Biodiversity
This course will combine lecture and student paper projects and presentations to explore the evolutionary and ecological processes that generate patterns of biological diversity as well as how species interactions and ecosystem function are affected by diversity. Of key interest will be how invasions, climate change, and habitat destruction affects diversity and function.
Prerequisite: BIOC59H3 or BIOC61H3
Enrolment Limits: 30
Breadth Requirement: Natural Sciences

BIOD95H3 Supervised Study in Biology
This course is designed to permit intensive examination of the primary literature of a select topic. Frequent consultation with the supervisor is necessary and extensive library research is required. The project will culminate in a written report. Students must obtain a permission form from SW420B that is to be completed and signed by the intended supervisor, then returned to SW420B. At that time, the student will be provided with an outline of the schedule and general requirements for the course. 5 sessions of group instruction will form part of the coursework.
Prerequisite: Satisfactory completion of 12.5 full credits, of which at least four must be Biology B- or C-level courses. Students must have permission of the instructor. In order to be eligible for BIOD95H3, with the same instructor as for BIOD98Y3 or BIOD99Y3, the student and instructor must provide a plan that goes beyond the work of those courses.
Exclusion: (BGYD03H3), (BGYD95H3)

BIOD98Y3 Directed Research in Biology
This course is designed to permit intensive examination of a selected topic in biology. Supervision of the work is arranged by mutual agreement between student and instructor. Students must obtain a permission form from SW420B that is to be completed and signed by the intended supervisor, then returned SW420B. At that time, the student will be provided with an outline of the schedule and general requirements for the course. 10 sessions of group instruction will form part of the coursework.
Prerequisite: Satisfactory completion of 13.5 full credits, of which at least four must be Biology B- or C-level courses and permission of the instructor.
Exclusion: CSB498Y, EEB498Y, (BGYD01Y3), (BGYD98Y3), (BOT460Y), (ZOO498Y)

BIOD99Y3 Directed Research in Biology
Identical to BIOD98Y3 but intended as a second research experience. In order to be eligible for BIOD99Y3, with the same instructor, the student and the instructor will have to provide a plan of study that goes beyond the work of BIOD98Y3.
Prerequisite: Satisfactory completion of 13.5 full credits, of which at least four must be Biology B- or C-level courses and permission of the instructor.
Exclusion: CSB498Y, EEB498Y, (BGYD02Y3), (BGYD99Y3), (BOT460Y), (ZOO498Y)

Centre for Teaching and Learning
Faculty List
C. Hasenkampf, B.Sc. (Loyola), M.Sc., Ph.D. (Florida State U.), Associate Professor
N. Johnston, B.A. (Trent), M.A., Ph.D. (York), Senior Lecturer
E. Khoo, B.Sc. (U. of Malaysia), M.A. (U. of Reading), Ph.D. (U. of South Queensland), Senior Lecturer
S. King, B.A. (Glendon), M.A., Ph.D. (U. of Western Ontario), Senior Lecturer
K. Persaud, B.Sc. (Toronto), B.Ed. (U of Western Ontario), Ph.D. (McMaster), Senior Lecturer
Z. Shahbazi, B.Sc. (Sharif University of Technology), M.Sc., Ph.D. (Toronto), Senior Lecturer
H.L. Meacock, B.A. (Trent), M.A. (York), Lecturer

Overview:
Our faculty support student learning and academic development with curricular and co-curricular programming. We offer courses as listed below, but also provide an extensive range of co-curricular support for students in writing, language development and quantitative reasoning.

Co-curricular Support is offered at:
English Language Development Centre: http://ctl.utsc.utoronto.ca/eld/main
Mathematics and Statistics Learning Centre: http://ctl.utsc.utoronto.ca/mslc/
Service Learning and Outreach: http://ctl.utsc.utoronto.ca/home/
Courses offered:
CTL courses offer students across the disciplines the opportunity to expand the scope of their academic engagement.

CTL01H3 Foundations in Effective Academic Communication
This highly interactive course for English Language Learners is designed to fast-track the development of critical thinking, reading, writing, and oral communication skills. Through the emphasis on academic writing and rapid expansion of vocabulary, students will gain practical experience with university-level academic texts and assignment expectations. Exclusion: (HUMA19H3), (LGGA19H3), (LGGA99H3), (CTLA19H3)
Breadth Requirement: Arts, Literature and Language

CTL02H3 Exploring Cross-Cultural Perspectives in Academic Contexts
This course develops students’ academic and communication skills through a critical exploration of Canadian culture and academic expectations. Using audio-visual and textual media, students learn through interactive online and in-class collaborative discussions. This course aims to foster dynamic academic acculturation for international students and develop their multi-literate engagement in English. Exclusion: (HUMA11H3), (LGGA11H3)
Breadth Requirement: Arts, Literature and Language

CTLB03H3 Introduction to Service Learning
In this experiential learning course, students apply discipline specific academic concepts as they work with community partners in the service of others. Working either within the academic community or with a discipline-related off-campus community partner, students develop problem solving, professional communication and self-reflective learning skills. Exclusion: (SCIB01H3), (SCIB02H3), (SCIB03H3)
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

Faculty List
R.A. McClelland, B.Sc., Ph.D. (Toronto), Professor Emeritus
J.C. Thompson, B.A., Ph.D. (Cambridge), Professor Emeritus
T.T. Tidwell, B.S. (Georgia Inst. Tech.), Ph.D. (Harvard), Professor Emeritus
A. Walker, B.Sc., Ph.D. (Nottingham), Professor Emeritus
D.J. Donaldson, B.Sc. (Carleton), Ph.D. (Carleton), Professor
B. Kraatz, Vordiplom (Heinrich-Heine), Diplom (Kent at Canterbury), Ph.D. (Calgary), Professor
F. Wania, Dipl.Geook. (Bayreuth), Ph.D. (Toronto), Professor
M. Simpson, B.Sc. (Alberta), Ph.D. (Alberta), Professor
S. Fraser, B.A. (Oxford), Ph.D. (Cambridge), Associate Professor
A. Simpson, B.Sc., Ph.D. (Birmingham), Associate Professor
A. Izmaylov, M.Sc. (Moscow), M.A. (Rice), Ph.D. (Rice), Assistant Professor
K. Kerman, B.Sc., M.Sc. (Aegean), Ph.D. (Japan Advanced Institute of Science and Technology), Assistant Professor
X. Zhang, B.Sc., M.Sc. (Shanghai), Ph.D. (Basel), Assistant Professor
W. Restivo, B.Sc. (Toronto), Senior Lecturer
S. Dalili, M.Sc., Ph.D. (Toronto), Senior Lecturer
A. Hadzovic, B.Sc. (Sarajevo), Ph.D. (Toronto), Lecturer
L. Mikhaylichenko, M.Sc., Ph.D. (Krasnodar, Russia), Lecturer
E.L.O. Sauer, B.Sc. (Toronto), Ph.D. (Ottawa), Lecturer
R. Soong, B.Sc. (Toronto), Ph.D. (Toronto), Senior Research Associate

Co-ordinator of First Year Studies in Chemistry: E. Sauer (416-287-7209) Email: esauer@utsc.utoronto.ca
Chemistry can be viewed as both a challenging intellectual pursuit and a powerful, practical tool for developing and handling the resources of our contemporary society. A sound knowledge of the fundamental concepts of chemistry is useful to any student in the Physical and Environmental or Life Sciences. The basic courses in chemistry are CHMA10H3 and CHMA11H3 which must be taken by those who wish to take further chemistry courses or who require chemistry for another science. Completion of CHMA10H3 and CHMA11H3 permits students to take any of the B-level courses in Chemistry. (Note: Some B-level CHM courses also have prerequisites in math and physics). These are divided according to the following sub-disciplines: Inorganic Chemistry, Analytical Chemistry, Physical Chemistry, Environmental Chemistry and Organic Chemistry. Thereafter, one can proceed to advanced-level courses at the C- and D-level.
Students who wish to enrol in St. George 400-series courses should note that completion of the following groups of courses, together with their co-requisite and prerequisites, will normally ensure admission to the St. George courses indicated, provided that B standing or permission of the instructor is obtained.

To enter St. George Series 430, complete the following U of T Scarborough courses:
- CHMA10H3
- CHMA11H3
- CHMB16H3
- CHMB31H3
- CHMC31Y3

To enter St. George Series 440 (except 447), complete the following U of T Scarborough courses:
- CHMA10H3
- CHMA11H3
- CHMB41H3
- CHMB42H3
- CHMC41H3
- CHMC42H3/CHMC47H3

Note: Timetabling constraints usually preclude U of T Scarborough C-level and St. George 400-level courses being taken in the same year.

Guidelines for course selection
While courses in Physics do not appear among the prerequisites or co-requisites of most courses in Chemistry, students are urged to take [PHYA10H3 & PHYA21H3] early in their Programs. Thus, the suggested first-year Program in Chemistry includes CHMA10H3, CHMA11H3, MATA30H3, [MATA36H3 or MATA37H3], [PHYA10H3 & PHYA21H3]. Students interested in Biological Chemistry or Biochemistry should also include BIOA01H3 & BIOA02H3. Completion of one of the Specialist or Major Programs listed below can lead to a number of career opportunities in industry, research, teaching, and government. Students who are interested in these Programs are urged to consult with the supervisors early in their academic careers.

The Specialist Programs in Chemistry, Biological Chemistry and the Major Programs in Biochemistry and Chemistry are eligible for inclusion in the Co-operative Program in Physical Sciences and in the Concurrent Teacher Education Program (CTEP). Please refer to the Physical Sciences section, the Co-operative Programs section and the Concurrent Teacher Education section of this Calendar for further information.

Service Learning and Outreach (Previously known as Science Engagement)
For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

SPECIALIST PROGRAM IN BIOLOGICAL CHEMISTRY (SCIENCE)
Supervisor: W. Restivo (416-287-7222) Email: restivo@utsc.utoronto.ca
This program is intended for students who want to specialize in Chemistry, but who are also interested in the chemistry of living systems.

Program Requirements
The program requires the completion of the following 15.0 full credits:

First Year:
- BIOA01H3 Life On Earth: Unifying Principles
- BIOA02H3 Life on Earth: Form, Function and Interactions
- CHMA10H3 Introductory Chemistry I: Structure and Bonding
- CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
- MATA30H3 Calculus I for Biological and Physical Sciences
- [MATA35H3 Calculus II for Biological Sciences or MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
- PHYA10H3 Introduction to Physics IA
- PHYA21H3 Introduction to Physics IIA

Note: PSCB57H3 requires either MATA36H3 or MATA37H3 as a prerequisite. [MATA36H3 or MATA37H3] is strongly recommended over MATA35H3 in order that future course selection is not compromised.

Second Year:
- BIOB10H3 Cell Biology
- BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
- BIOB12H3 Laboratory for Cell and Molecular Biology
- CHMB31H3 Introduction to Inorganic Chemistry
- CHMB41H3 Organic Chemistry I
- CHMB42H3 Organic Chemistry II

Second or Third Year:
- CHMB16H3 Techniques in Analytical Chemistry
- CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
Chemistry 70

CHMB21H3 Chemical Structure and Spectroscopy
and
0.5 full credit from the following:
MATA23H3 Linear Algebra I
PSCB57H3 Introduction to Scientific Computing
STAB22H3 Statistics I

Third Year:
BIOC12H3 Biochemistry I: Proteins and Enzymes
BIOC13H3 Biochemistry II: Bioenergetics and Metabolism
BIOC23H3 Practical Approaches to Biochemistry
CHMC47H3 Bio-Organic Chemistry

Third or Fourth Year:
CHMC11H3 Principles of Analytical Instrumentation
CHMC31Y3 Intermediate Inorganic Chemistry
[CHMC41H3 Organic Reaction Mechanisms or CHMC42H3 Organic Synthesis]

Fourth Year:
CHMD79H3 Topics in Biological Chemistry
1.5 full credits in D-level or 400-level CHM courses including:
at least 0.5 full credit from the following:
CHMD90Y3 Directed Research
CHMD91H3 Directed Research
CHMD92H3 Advanced Organic Chemistry Lab Course
and at least 0.5 full credit from the following:
CHMD69H3 Bioinorganic Chemistry
CHMD71H3 Pharmaceutical Chemistry

SPECIALIST PROGRAM IN CHEMISTRY (SCIENCE)
Supervisor: S. Dalili (416-287-7215) Email: sdalili@utsc.utoronto.ca
This Program is meant for students who are interested in obtaining a strong background in all aspects of modern chemistry.

Program Requirements
The Program requires completion of 14.0 full credits as follows:
First Year:
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
[ MATA30H3 Calculus I for Biological and Physical Sciences and MATA36H3 Calculus II for Physical Sciences] or [MATA31H3 Calculus I for Mathematical Sciences and MATA37H3 Calculus II for Mathematical Sciences]
PHYA10H3 Introduction to Physics IA
PHYA21H3 Introduction to Physics IIA
and
1.0 full credit chosen from:
ASTA01H3 Introduction to Astronomy and Astrophysics I: The Sun and Planets
ASTA02H3 Introduction to Astronomy and Astrophysics II: Beyond the Sun and Planets
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions
EESA05H3 Environmental Hazards
EESA06H3 Introduction to Planet Earth
MATA23H3 Linear Algebra I
PSCB57H3 Introduction to Scientific Computing
STAB22H3 Statistics I

Second Year:
CHMB16H3 Techniques in Analytical Chemistry
CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
CHMB21H3 Chemical Structure and Spectroscopy
CHMB31H3 Introduction to Inorganic Chemistry
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II
CHMB62H3 Introduction to Biochemistry
MATB41H3 Techniques of Calculus of Several Variables I

Third Year:
CHMC11H3 Principles of Analytical Instrumentation
CHMC16H3 Analytical Instrumentation
MAJOR PROGRAM IN CHEMISTRY (SCIENCE)

Supervisor: S. Mikhaylichenko (416-287-7207) Email: mikhay@utsc.utoronto.ca
This Program offers the possibility of obtaining an introduction to all of the sub-disciplines of Chemistry.

Program Requirements
Students should complete the following 7.5 full credits:

First Year:
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
MATA30H3 Calculus I for Biological and Physical Sciences
[MATA35H3 Calculus II for Biological Sciences or MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
PHYA10H3 Introduction to Physics IA
PHYA21H3 Introduction to Physics IIA

Note: PHY110Y is not an acceptable substitute for [PHYA10H3 & PHYA21H3]

Second and Later Years:
4.5 credits in Chemistry, of which 2.0 must be at the C- or D-level. One of these C- or D-level half credits must include a laboratory component.

Students should note that if they are going to select CHMB20H3/CHMB21H3, then MATA36H3 or MATA37H3 must be taken instead of MATA35H3. If CHMC20H3/CHMC21H3 are selected, MATB41H3 is a prerequisite.

MAJOR PROGRAM IN BIOCHEMISTRY (SCIENCE)

Supervisor: Alen Hadzovic (416-287-5602) Email: alen.hadzovic@utoronto.ca
This Program places a greater emphasis on the biological aspects of chemistry than does the general Chemistry Major Program. It is offered for students who are primarily interested in chemistry but also want to study the chemistry of living systems.

Program Requirements
Students should complete the following 8.0 full credits:

First Year:
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

Second and Later Years:
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
BIOB12H3 Cell & Molecular Biology Laboratory
BIOC12H3 Biochemistry I: Proteins & Enzymes
BIOC13H3 Biochemistry II: Bioenergetics & Metabolism
BIOC23H3 Practical Approaches to Biochemistry
CHMB16H3 Techniques in Analytical Chemistry
CHMB41H3 Organic Chemistry I
CHMB42H3 Organic Chemistry II
[CHMC41H3 Organic Reaction Mechanisms or CHMC42H3 Organic Synthesis]
CHMC47H3 Bio-Organic Chemistry

And 0.5 credit from the following:
CHMB20H3* Chemical Thermodynamics and Elementary Kinetics
CHMB21H3* Chemical Structure and Spectroscopy
CHMB31H3 Introduction to Inorganic Chemistry
CHMB55H3 Environmental Chemistry
CHMC11H3 Principles of Analytical Instrumentation
CHMC16H3 Analytical Instrumentation
CHMC21H3 Topics in Biophysical Chemistry
CHMC31Y3 Intermediate Inorganic Chemistry
[CHMC41H3 Organic Reaction Mechanisms or CHMC42H3 Organic Synthesis]


SPECIALIST PROGRAM IN ENVIRONMENTAL CHEMISTRY (SCIENCE)
See the Environmental Science section of this Calendar for program requirements.

SPECIALIST PROGRAM IN NATURAL SCIENCES (SCIENCE)
See the Physical Sciences section of this Calendar for program requirements.

CHMA10H3 Introductory Chemistry I: Structure and Bonding
This course will introduce the study of chemical transformations of matter, from a macroscopic and microscopic perspective. It starts with a quantitative description of gases, solids and solutions and develops ideas of bonding and structure in chemical compounds with a particular emphasis on organic and biological molecules. This course includes a three hour laboratory every other week which alternates with a one hour mandatory tutorial. Prerequisite: Grade 12 Chemistry & [Grade 12 Advanced Functions or Calculus] Corequisite: None, but [(MATA20H3) & (MATA21H3)] or [MATA30H3 & [MATA35H3 or MATA36H3 or MATA37H3]] are strongly recommended. Note: MATA30H3 & [MATA36H3 or MATA37H3] are required for some higher level and other Physical and Environmental Sciences courses. Exclusion: CHM140Y, CHM151Y Breadth Requirement: Natural Sciences

CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
In this course reactions and equilibria in chemical systems are explored through their thermodynamic properties and chemical kinetics. Acid/base and redox equilibria will be covered and some reactions of organic molecules will be introduced. This course includes a three hour laboratory every other week which alternates with a one hour mandatory tutorial. Prerequisite: CHMA10H3 Corequisite: None, but [(MATA20H3) & (MATA21H3)] or [MATA30H3 & [MATA35H3 or MATA36H3 or MATA37H3]] are strongly recommended. Note: MATA30H3 & [MATA36H3 or MATA37H3] are required for some higher level and other Physical and Environmental Sciences courses. Exclusion: CHM139H, CHM140Y, CHM151Y Breadth Requirement: Natural Sciences

CHMB16H3 Techniques in Analytical Chemistry
An introduction to the principles and methods of classical analysis and the provision of practical experience in analytical laboratory techniques. The course deals primarily with quantitative chemical analysis. Classical methods of volumetric analysis, sampling techniques, statistical handling of data are studied, as well as a brief introduction to spectrochemical methods. This course includes a four hour laboratory every week. Prerequisite: CHMA10H3 & CHMA11H3 Exclusion: CHM217H Recommended Preparation: CHMB31H3 Breadth Requirement: Natural Sciences

CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
The concept of chemical potential; phase equilibria; solutions; chemical equilibria (including electrochemical applications); elementary reactions; multi-step and coupled reactions (with biochemical applications); elementary collision theory and TST. Prerequisite: [CHMA10H3 & CHMA11H3] & MATA30H3 & [MATA35H3 or MATA36H3] & PHYA11H3. Note: that PHYA21H3 and MATB41H3 are prerequisites for the C-level physical chemistry courses. Exclusion: CHM223H, CHM225Y Breadth Requirement: Natural Sciences

CHMB21H3 Chemical Structure and Spectroscopy
Atomic structure and spectra; term symbols and their meaning; valence bond theory; LCAO-MO; molecular spectroscopies. Prerequisite: CHMB20H3. Note: that this implies all the prerequisites for that course as well. Exclusion: CHM223H, CHM225Y Breadth Requirement: Natural Sciences

CHMB31H3 Introduction to Inorganic Chemistry
Fundamentals of coordination, solid state and descriptive Inorganic Chemistry. Structures, bonding and reactivity of transition metal coordination compounds; solid state structures and energetics; selected chemistry of non-transition elements. Examples will be taken from environmentally and biologically important inorganic compounds. Prerequisite: CHMA10H3 & CHMA11H3 Breadth Requirement: Natural Sciences

CHMB41H3 Organic Chemistry I
Chemical bonding and an introduction to aliphatic and aromatic compounds. Conformational analysis and stereochemistry. Free radical reactions of alkanes. Chemistry of alkenes, dienes and alkynes. Substitution and elimination reactions. This course includes a four hour laboratory every other week. Prerequisite: CHMA10H3 Exclusion: CHM138H, CHM151Y Breadth Requirement: Natural Sciences
CHMB42H3 Organic Chemistry II
Spectroscopy of organic compounds. Aromatic substitution. Chemistry of carbonyl compounds. An introduction to the chemistry of biologically important compounds, including heterocycles, carbohydrates, amino acids, and nucleic acids. This course includes a four hour laboratory every other week.
Prerequisite: CHMA11H3 & CHMB41H3
Exclusion: CHM247H1, CHM249H
Breadth Requirement: Natural Sciences

CHMB55H3 Environmental Chemistry
An investigation of aspects of chemical substances and processes as they occur in the environment, including both naturally occurring and synthetic chemicals. This course will include an introduction to atmospheric chemistry, aqueous chemistry, some agricultural and industrial chemistry, and chemical analysis of contaminants and pollutants.
Prerequisite: CHMA10H3 & CHMA11H3
Exclusion: CHM310H
Breadth Requirement: Natural Sciences

CHMB62H3 Introduction to Biochemistry
This course is designed as an introduction to the molecular structure of living systems. Topics will include the physical and chemical properties of proteins, enzymes, fatty acids, lipids, carbohydrates, metabolism and biosynthesis. Emphasis will be placed on the relationships between the chemical structure and biological function.
Prerequisite: CHMA10H3, CHMA11H3, CHMB41H3
Exclusions: BCH210H, BCH242Y, BCH311H, CHM361H, CHM362H
Breadth Requirement: Natural Sciences

CHMC11H3 Principles of Analytical Instrumentation
An introduction to the workings and application of modern analytical instrumentation. A range of modern instrumentation including NMR spectroscopy, Mass Spectrometry, Microscopy, Light Spectroscopy (visible, Ultra Violet, Infrared, Fluorescence, Phosphorescence), X-ray, Chromatography and electrochemical separations will be addressed. Principles of measurement; detection of photons, electrons and ions; instrument and experiment design and application; noise reduction techniques and signal-to-noise optimization will be covered.
Prerequisite: CHMB16H3
Exclusion: CHM317H
Recommended Preparation: CHMB20H3 & CHMB21H3
Breadth Requirement: Natural Sciences

CHMC16H3 Analytical Instrumentation
A laboratory course to complement CHMC11H3, Principles of Analytical Instrumentation. This course provides a practical introduction and experience in the use of modern analytical instrumentation with a focus on the sampling, sample preparation (extraction, clean-up, concentration, derivatization), instrumental trace analysis and data interpretation of various pharmaceutical, biological and environmental samples. This course includes a four hour laboratory every week.
Prerequisite: CHMC11H3
Exclusion: CHM317H
Breadth Requirement: Natural Sciences

CHMC20H3 Intermediate Physical Chemistry
Basic statistical mechanics and applications to thermochemistry and kinetics; intermolecular interactions; concepts in reaction dynamics.
Prerequisite: CHMB20H3 & CHMB21H3 & MATB41H3 & PHYA21H3
Breadth Requirement: Natural Sciences

CHMC21H3 Topics in Biophysical Chemistry
Advanced topics in Physical Chemistry with emphasis on biochemical systems. Spectroscopic methods for (bio)molecular structure determination, including IR, NMR, UV/VIS; colloid chemistry; polymers and bio-polymers, bonding structure and statistical mechanics; physical chemistry of membranes, active transport and diffusion; oscillatory (bio)chemical reactions.
Prerequisite: CHMB20H3 & CHMB21H3 & MATB41H3 & PHYA21H3
Breadth Requirement: Natural Sciences

CHMC31Y3 Intermediate Inorganic Chemistry
A more detailed discussion (than in CHMB31H3) of the structure, bonding, spectroscopy and reactivity of main group, transition metal and organo-metallic compounds. Special topics may include inorganic solids and materials, biologically and environmentally important inorganic compounds, and catalysis. The laboratory will introduce a variety of synthetic techniques, with characterization of products by both classical and instrumental methods. This laboratory is six hours in duration and occurs every week.
Prerequisite: CHMB16H3 & CHMB31H3 & CHMB41H3 & CHMB42H3
Breadth Requirement: Natural Sciences

CHMC41H3 Organic Reaction Mechanisms
Theory and mechanisms of organic reactions; principles of structure, introduction to aromaticity, spectroscopy and polymers. Theories of bonding. The laboratory experiments are designed to complement the topics covered in lectures. Offered in odd numbered years, alternating with CHMC42H3. This course includes a four hour laboratory every week. Prerequisite: CHMB41H3 & CHMB42H3
Exclusion: CHM348H
Breadth Requirement: Natural Sciences

CHMC42H3 Organic Synthesis
Principles of synthesis organic and functional group transformations; compound stereo-chemistry, spectroscopy and structure elucidation. Offered in even-numbered years alternating with CHMC41H3. This course includes a four hour laboratory every week.
Prerequisite: CHMB41H3 & CHMB42H3
Exclusion: CHM346H
Breadth Requirement: Natural Sciences

CHMC47H3 Bio-Organic Chemistry
The chemistry of heterocycles, nucleic acids, terpenes, steroids and other natural products; amino acids, proteins and carbohydrates; introduction to enzyme structure and catalysis. This course includes a four hour laboratory every week.
Prerequisite: CHMB41H3 & CHMB42H3
Exclusion: CHM347H
Breadth Requirement: Natural Sciences
CHMD39H3 Topics in Inorganic Chemistry
Advanced topics in inorganic chemistry will be covered at a modern research level. The exact topic will be announced in the Winter Session prior to the course being offered. Prerequisite: Permission of the instructor. Normally only for individuals who have completed fifteen full credits, including at least two C-level Chemistry courses, and who are pursuing one of the Chemistry Programs.

CHMD59H3 Topics in Environmental Chemistry
Advanced topics in environmental chemistry will be covered at a modern research level. The exact topic will be announced in the Winter Session prior to the course being offered. Prerequisite: Permission of the instructor. Normally recommended for individuals who have completed fifteen full credits, including at least two C-level Chemistry courses, and who are pursuing one of the Chemistry Programs.

CHMD69H3 Bioinorganic Chemistry
This course will explore the inorganic chemistry behind the requirement of biological cells for metals. The course will begin with the principles of coordination chemistry and a survey of the abilities of various functional groups within proteins and nucleic acids to form coordination complexes with metal ions. Their reactivity will be discussed in the context of the reaction mechanisms of specific metalloenzymes. Medically-relevant topics such as mechanisms by which organisms obtain required metal ions from their environment, the toxicity of metals and use of platinum containing compounds in treating cancer will also be covered. Prerequisite: BIOC12H3 & BIOC13H3 & CHMC31Y3 Exclusion: CHM333H, CHM437H Breadth Requirement: Natural Sciences

CHMD71H3 Pharmaceutical Chemistry
The course focuses on the important concepts in the design and synthesis of drugs. The course will begin with the principles of pharmacology, drug metabolism and toxicology. Drug design and structure-activity relationships including the synthetic and pharmacological concepts will be discussed. Case studies of drugs will be studied in detail. Prerequisite: CHMC41H3 & CHMC42H3 & CHMC47H3 Exclusion: CHM440H Breadth Requirement: Natural Sciences

CHMD79H3 Topics in Biological Chemistry
Advanced topics in biological chemistry will be covered at a modern research level. The exact topic will be announced in the Winter Session prior to the course being offered. Prerequisite: Permission of the instructor. Normally recommended for individuals who have completed fifteen full credits, including at least two C-level Chemistry courses, and who are pursuing one of the Chemistry Programs.

CHMD89H3 Introduction to Green Chemistry
The 'twelve principles' of green chemistry will be discussed in the context of developing new processes and reactions (or modifying old ones) to benefit society while minimizing their environmental impact. Examples will be taken from recent literature as well as from industrial case studies. Prerequisite: CHMB31H3 & [CHMC41H3 or CHMC42H3] Recommended Preparation: CHMC31Y3 Enrolment Limits: 15 Breadth Requirement: Natural Sciences

CHMD90Y3 CHMD91H3 Directed Research
Participation in a research project under the direction of a faculty member. This project may involve original research, or may involve a thorough literature review and report on a topic of current interest. Approximately 260 hours of work are expected in CHMD90Y3 and 130 hours in CHMD91H3. The topic will be selected in conference with a member of the chemistry staff. Progress will be monitored during periodic consultations with the staff member. Please see the note below on registration for both courses.

Note for students planning to register in CHMD90Y3 or CHMD91H3
Students should apply to the Program Supervisor of Studies by June 20th to be admitted into the course. The Program Supervisor of Studies (or designate) is the only one permitted to give “permission of instructor”. Application will consist of:
- The name of the proposed supervisor, with his/her signature indicating approval
- A brief description of the planned research

A list of relevant courses already passed and to be taken during the current session Generally, only students who have completed 15 full credits in total including at least 1.0 full credit of C-level CHM courses containing a lab component (i.e. CHMC16H3, CHMC31Y3, CHMC41H3/CHMC42H3, CHMC47H3, BIOC23H3) will be accepted into the course. Research supervisors should normally be members of the CHM group at U of T Scarborough. Potential supervisors outside these groups must identify a co-supervisor who is a member of the CHM group at U of T Scarborough. Students doing research at the St. George campus will be graded with the cohort of 4th year research students in the Chemistry department; those pursuing their research at U of T Scarborough will be graded with the U of T Scarborough cohort. Prerequisite: Permission of the instructor. Exclusion: Students may take either CHMD90Y3 or CHMD91H3 but not both.

CHMD92H3 Advanced Organic Chemistry Laboratory Course
A lab course designed to introduce students to modern synthetic methods while performing multi-step syntheses. The course will consist of two, six hour lab days every week. Students will develop practical skills by working with important reactions taken from pharmaceutical chemistry and the chemistry of naturally occurring substances. Prerequisite: One of CHMC41H3, CHMC42H3 or CHMC31Y3 Exclusion: CHMD90Y3, CHMD91H3 Enrolment Limits: 10 Breadth Requirement: Natural Sciences
City Studies

Faculty List
J. Hannigan, B.A., M.A. (Western Ontario), Ph.D. (Ohio State), Professor
J. Miron, B.A. (Queen's), M.A. (Penn.), M.Sc. (pl.), Ph.D. (Toronto), Professor
M.L. Kohn, B.A. (Williams College), M.A., Ph.D. (Cornell University), Associate Professor
A. Sorensen, B.F.A. (Nova Scotia College of Art and Design), M.Sc., Ph.D. (London), Associate Professor
S.C. Bunce, B.A. (Guelph), M.E.S. Pl. (York), Ph.D. (York), Assistant Professor
D. Silver, B.A. (Berkeley), M.A., Ph.D. (Chicago), Assistant Professor
A. Allahwala, B.A., M.A. (Free University, Berlin), Ph.D. (York), Lecturer

Undergraduate Counsellor: J. Roopmarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

A pre-professional Major Program for students interested in career paths that may be city-related. Students acquire a combination of conceptual, methodological, and critical skills relevant in a variety of professional fields including city planning, real estate development, transportation, housing, community development, urban governance, and city management. The Major Program in City Studies is multidisciplinary: it is designed to give students the opportunity to see how they might apply ideas about cities from the social sciences and kindred disciplines in their field of professional interest. The Program also offers preparation for students interested in pursuing graduate education in a field of study related to cities.

Guidelines for 1st year course selection
Students intending to complete a program in City Studies should take at least 1.0 full credit from the courses listed in Requirement 1 of the Major Program in City Studies within their first 4.0 credits.

MAJOR PROGRAM IN CITY STUDIES (ARTS)

Guidelines for Major Program completion
The City Studies curriculum has three areas of concentration: (1) City-Building, (2) Community Development and (3) City Governance. Major students are welcome to take courses in more than one area of concentration and are encouraged to take at least three of the City Studies core courses, CITB02H3 Foundations in City Studies (required for all Major students in City Studies), CITB01H3 Canadian Cities and Planning, CITB03H3 Social Planning and Community Development or CITB04H3 City Politics. These core courses cover foundational concepts of the program and are considered essential preparation for upper level courses.

<table>
<thead>
<tr>
<th>City Building</th>
<th>Community Development</th>
<th>City Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITB01H3 Canadian Cities and Planning</td>
<td>CITB03H3 Social Planning and Community Development</td>
<td>CITB04H3 City Politics</td>
</tr>
<tr>
<td>CITC03H3 Real Estate and the City</td>
<td>CITC01H3 Urban Communities and Neighbourhoods Case Study</td>
<td>CITC12H3 Local Government and Management</td>
</tr>
<tr>
<td>CITC04H3 Municipal and Planning Law in Ontario</td>
<td>CITC02H3 Learning in Community Service</td>
<td>CITC15H3 Municipal Finance</td>
</tr>
<tr>
<td>CITC14H3 Environmental Planning Analysis</td>
<td>CITC07H3 Urban Social Policy</td>
<td>CITC16H3 Regional Governance and Planning</td>
</tr>
<tr>
<td>CITC18H3 Transportation Policy</td>
<td>CITC08H3 Cities and Community Development</td>
<td>CITC17H3 Civic Engagement in Urban Politics</td>
</tr>
</tbody>
</table>

Note: It is Department policy that students without the prerequisite will be removed from the course. Students should carefully check the prerequisites required for particular B- and C-level courses.

Note: That some upper-level courses (e.g., SOC and ECM) are part of limited enrolment programs, with first preference in these courses going to students enrolled in those programs.

Program Requirements
This program requires a total of 7.0 full credits.

1. Introduction to Social Science Thought (1.0 full credit from among the following):
   - ANTA01H3 Introduction to Anthropology: Becoming Human
   - ANTA02H3 Introduction to Anthropology: Culture, Society and Language
   - HLTA01H3 Plagues and Peoples
   - POLA51H3 Critical Issues of Canadian Democracy
   - POLA83H3 Exploring Globalization
   - POLA84H3 Globalization and Governance
   - SOCA01H3 Introduction to Sociology I
   - SOCA02H3 Introduction to Sociology II
   - GGRA02H3 The Geography of Global Processes
GGRA03H3 Cities and Environments
[ECMA01H3 Introduction to Microeconomics or ECMA04H3 Introduction to Microeconomics: A Mathematical Approach]
[ECMA05H3 Introduction to Macroeconomics or ECMA06H3 Introduction to Macroeconomics: A Mathematical Approach]

2. Core courses (1.5 full credits including)
CITB02H3 Foundations of City Studies
and
1.0 credits from among the following:
CITB01H3 Canadian Cities and Planning
CITB03H3 Social Planning and Community Development
CITB04H3 City Politics

3. City Studies Fundamentals of (at least 1.5 full credits from among the following):
DTSB01H3 Introduction to Diaspora and Transnational Studies I
DTSB02H3 Introduction to Diaspora and Transnational Studies II
[EEA05H3 Environmental Hazards or EESA06H3 Introduction to Planet Earth]
GGRB05H3 Urban Geography
GGRB13H3 Social Geography
GGRB28H3 Geographies of Disease
HLTB04H3 Health and the Urban Environment
POLB50H3 Canada's Political Institutions
SOCB44H3 Sociology of Cities and Urban Life
(SOCB45H3) Urban Sociology: Micro-Analysis
WSTB12H3 Women: Issues of Violence and Safety

4. Methods (1 full credit from among the following):
[SOCB06H3 Social Statistics or STAB22H3 Statistics I]
[GGRA30H3 GIS and Empirical Reasoning or
[(EESA08H3) GIS for the Beginning Student or
EESC03H3 Geographic Information Systems and Remote Sensing]

5. Applications (at least 2.0 full credits from among the following):
(ANTC39H3) Foundation and Theoretical Issues in Anthropological Demography
ANTC40H3 Methods and Analysis in Anthropological Demography
CITC01H3 Urban Communities and Neighbourhoods Case Study: East Scarborough
CITC02H3 Learning In Community Service
CITC03H3 Real Estate and the City
CITC04H3 Municipal and Planning Law in Ontario
CITC07H3 Urban Social Policy
CITC08H3 Cities and Community Development
CITC10H3 Selected Issues in City Studies
CITC12H3 Local Government and Management
CITC14H3 Environmental Planning
CITC15H3 Municipal Finance
CITC16H3 Regional Governance and Planning
CITC17H3 Civic Engagement in Municipal Politics
CITC18H3 Urban Transportation Policy Analysis
CITC40H3 Megacities and Global Urbanization
CITD01H3 City Issues and Strategies
EESC21H3 Urban Environmental Problems of the Greater Toronto Area
GGRC02H3 Population Geography
GGRC04H3 Urban Residential Geography
GGRC13H3 Urban Political Geography
GGRC27H3 Location and Spatial Development
GGRC33H3 The Toronto Region
GGRD09H3 Feminist Geographies
HISC32H3 The Emergence of Modern America, 1877-1933
HISC36H3 People in Motion: Immigrants and Migrants in U.S. History
(HISD38H3) Topics in American Urban History: New York City
POLC53H3 Canadian Environmental Politics
POLC66H3 Public Policy Making
POLC67H3 Public Policy in Canada
SOCC03H3 Collective Behaviour
SOCC04H3 Social Movements
SOCC26H3 Sociology of Urban Growth
WSTC14H3 Women, Community, and Policy Change
WSTC20H3 Women and Environments
MAJOR (CO-OPERATIVE) PROGRAM IN CITY STUDIES (ARTS)

Co-op Contact: askcoop@utsc.utoronto.ca

Graduates will receive an Honours B.A. degree wherein they must combine the Major (Co-operative) Program in City Studies with one of the following:

- Major Program in Anthropology
- Major Program in Economics for Management
- Major Program in Environmental Science
- Major Program in History
- Major Program in Human Geography
- Major Program in Political Science
- Major Program in Sociology
- Major Program in Studio
- Major Program in Women's and Gender Studies

The Program is intended to complement the chosen academic discipline and to give students the opportunity to see how they might apply ideas from that discipline in their field of professional interest.

For information on admissions, fees, work terms and standing in the Program, please see the Co-operative Programs section of this Calendar.

Program Admission

Prospective Applicants: For direct admission from secondary school or for students, who wish to transfer to UTSC from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.

Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits including 1.0 from the courses listed in Requirement 1 of the Major Program in City Studies plus a cumulative GPA of at least 2.5.

Program Requirements

The Major (Co-operative) Program in City Studies combines academic studies in various disciplines with work terms in private enterprise, the public sector, or non-governmental organizations. It includes all of the requirements of the Major Program listed above. In addition, students must successfully complete the non-credit Arts & Science Co-op Work Term Preparation course and two work terms.

Work Terms

Students must satisfactorily complete two work terms, each of four-months duration. To be eligible for the first work term, students must have completed at least 10 full credits, including 5 full credits as a U of T Scarborough student. These must include at least one full credit drawn from each of areas 1 (Introduction to Social Science Thought), 2 (Core Courses), 3 (Fundamentals of City Studies), and 4 (Methods). Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term. Students are advised that being available for work terms during fall and winter may increase the variety of work available, and this in turn requires students to take courses during at least one summer session.

CITB01H3  Canadian Cities and Planning

After reviewing the history of urban and regional planning in Canada, this course considers alternative ideologies, models of public choice, the role of the planner, the instruments of planning, tools for the analysis of planning, and planning in the context of the space economy.

Exclusion: (GGRB06H3)

Recommended Preparation: Completion of Requirement 1 of the Major Program in City Studies

Breadth Requirement: Social & Behavioural Sciences

CITB02H3  Foundations of City Studies

A review of the major characteristics and interpretations of cities, urban processes and urban change as a foundation for the Program in City Studies. Ideas from disciplines including Anthropology, Economics, Geography, Planning, Political Science and Sociology, are examined as ways of understanding cities.

Prerequisite: At least 4.0 credits, of which at least 2.0 must be in ANT, ECM, GGR, POL or SOC

Breadth Requirement: Social & Behavioural Sciences

CITB03H3  Social Planning and Community Development

This course provides an overview of the history, theory, and politics of community development and social planning as an important dimension of contemporary urban development and change.

Prerequisite: Completion of Requirement 1 of the Major Program in City Studies

Breadth Requirement: Social & Behavioural Sciences

CITB04H3  City Politics

This course is the foundations course for the city governance concentration in the City Studies program and provides an introduction to the study of urban politics with particular emphasis on different theoretical and methodological approaches to understanding urban decision-making, power, and conflict.

Prerequisite: Any 4.0 credits

Enrolment Limits: 150

Breadth Requirement: Social & Behavioural Sciences
CITC01H3 Urban Communities and Neighbourhoods Case Study: East Scarborough
This course engages students in a case study of some of the issues facing urban communities and neighbourhoods today. Students will develop both community-based and academic research skills by conducting research projects in cooperation with local residents and businesses, non-profit organizations, and government actors and agencies. Prerequisite: CITB01H3 & CITB02H3 & permission of instructor
Exclusion: GGRC41H3 if taken in the 2008 Fall Session
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

CITC02H3 Learning in Community Service
This will be a service learning course based in Scarborough communities in which students learn about community issues first-hand by volunteering for community-based organizations. Student evaluation will be based on completion of volunteer hours and grading of student journals that will: 1. Describe the service work, and 2. Reflect on the service work and relate it to lectures and required readings. Prerequisite: CITB01H3 & CITB02H3 & permission of instructor
Recommended Preparation: CITC01H3
Enrolment Limits: 30

CITC03H3 Real Estate and the City
Operation of property markets; cities as markets in land and structures; stocks of property and flows of accommodation service; location of industry, offices and retailing within the city; rental and owner-occupied housing; depreciation and maintenance; cyclical behaviour in metropolitan property markets; impacts of local government; property taxation. Prerequisite: CITB01H3 & CITB02H3 & [ECMB01H3 or ECMB02H3]
Exclusion: (GGBR10H3)
Breadth Requirement: Social & Behavioural Sciences

CITC04H3 Municipal and Planning Law in Ontario
Constitutional authority, municipal corporations, official plans, zoning bylaws, land subdivision and consents, development control, deed restrictions and common interest developments, Ontario Municipal Board. Prerequisite: CITB01H3, CITB02H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC07H3 Urban Social Policy
In recent years social policy has been rediscovered as a key component of urban governance. This course examines the last half-century of evolving approaches to social policy and urban inequality, with particular emphasis on the Canadian urban experience. Major issues examined are poverty, social exclusion, labour market changes, housing, immigration and settlement. Prerequisite: CITB01H3, CITB02H3
Exclusion: CITC10H3 if taken in the 2011 Winter session
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC08H3 Cities and Community Development
An examination of community development as the practice of citizens and community organizations to empower individuals and groups to improve the social and economic wellbeing of their communities and neighbourhoods. The course will consider different approaches to community development and critically discuss their potential for positive urban social change. Prerequisite: CITB01H3, CITB02H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC10H3 Selected Issues in City Studies
Examination of one or more current issues in cities. The specific issues with vary depending on the instructor. Prerequisite: CITB01H3 & CITB02H3
Breadth Requirement: Social & Behavioural Sciences

CITC12H3 Local Government and Management
This course examines the structure of local government and the processes of urban policy-making in Canada. Topics include municipal elections, city council, council committees, municipal budgets, city departments, and the process of urban policy-making. Prerequisite: CITB02H3 and an additional 0.5 credits from among the CIT B-level core courses
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC14H3 Environmental Planning
This course introduces students to questions of urban ecology and environmental planning, and examines how sustainability and environmental concerns can be integrated into urban planning processes and practices. Prerequisite: CITB02H3 and an additional 0.5 credits from among CIT B-level core courses
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC15H3 Municipal Finance
This course examines the revenue raising capacity of municipalities from a Canadian and comparative perspective, and discusses the implications of municipal finance for urban public policy, planning, and the provision of municipal services. Topics include state finances, municipal taxation, inter-governmental transfers, and alternative revenue sources. Prerequisite: CITB02H3 and an additional 0.5 credits from among CIT B-level core courses
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC16H3 Regional Governance and Planning
The development of large metropolitan areas cuts across municipal boundaries and many urban planning and governance issues require regional coordination. This course examines different approaches to regional governance, planning, and service delivery and highlights the institutional and political challenges to regional cooperation and policy development. Prerequisite: CITB02H3 and an additional 0.5 credits from among CIT B-level core courses
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
CITC17H3 Civic Engagement in Urban Politics
This course examines the engagement of citizen groups, neighbourhood associations, urban social movements, and other non-state actors in urban politics, planning, and governance. The course will discuss the contested and selective insertion of certain groups into city-regional decision-making processes and structures.
Prerequisite: CITB02H3 and an additional 0.5 credits from among CIT B-level core courses
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC18H3 Urban Transportation Policy Analysis
- Demand forecasting; methodology of policy analysis; impacts on land values, urban form and commuting; congestion; transit management; regulation and deregulation; environmental impacts and safety.
- Prerequisite: University-level half-credit in data analysis & GGRB02H3 & one of CITB01H3, ECMB01H3, ECMB02H3, GGRB05H3, (GGRB06H3), (GGRB27H3), GGRC27H3 Exclusion: GGR324H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

CITC40H3 Megacities and Global Urbanization
The last 50 years have seen dramatic growth in the global share of population living in megacities over 10 million population, with most growth in the global south. Such giant cities present distinctive infrastructure, health, water supply, and governance challenges, which are increasingly central to global urban policy and health.
Same as GGRC40H3.
Prerequisite: [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3]
Exclusion: GGRC40H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

Classical Studies

Faculty List
J. Warden, M.A. (Cantab), Professor Emeritus
M.E. Irwin, B.A., M.A., Ph.D. (Toronto), Associate Professor Emerita
K. Blouin, B.A., M.A., Ph.D. (Laval and Nice), Assistant Professor

Program Director: K. Blouin Email: kblouin@utsc.utoronto.ca

Classical Studies is a pluridisciplinary field dedicated to the study of the ancient Greek and Roman worlds. It involves disciplines such as history, literature, religion, linguistics, art history, archaeology, and philosophy and pertains to the study of wide areas of Europe, North Africa and Asia over several millennia (ca. 2000 B.C.-700 A.D.).

The classical world was in essence Greek and Roman. Yet it was also a complex, heterogeneous, permeable, mixed and constantly evolving world in which the Greeks and the Romans have always been intertwined with other peoples and cultures. Classical studies at UTSC offer students both a thorough examination of the main features of the Greek and Roman civilizations and a substantial introduction to the other peoples and cultures which were part of or interacted with it. In most courses the ancient written sources are studied in translation.

Guidelines for 1st year course selection
Students who intend to complete the Minor program in Classics should include CLAA04H3 & CLAA06H3 in their 1st year course selection. Students are also strongly encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their studies. The Classical Studies Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_cl.html

MINOR PROGRAM IN CLASSICAL STUDIES (ARTS)
Undergraduate Advisor: 416-287-7184 Email: classics-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete four full credits, as follows:

1. **Introduction**
   CLAA04H3 The Ancient Mediterranean World

2. **History and Culture**
   CLAB05H3 History and Culture of the Greek World
   CLAB06H3 History and Culture of the Roman World
3. **Mythology and Religion**
   - CLAA06H3 Ancient Mythology II: Greece and Rome

4. **Literature** (0.5 credit from the following courses)
   - CLAC11H3 Classical Literature I: Poetry
   - CLAC12H3 Classical Literature II: Prose

5. **Electives** (1.5 full credits from the following courses, including at least 1.0 full credit at the C- or D-level; before choosing their electives, students need to take at least 1.0 full credit at the A-level, 1.0 full credit at the B-level, and 0.5 credit at the C-level):
   - **Classical Studies**
     - CLAA05H3 Ancient Mythology I: Mesopotamia and Egypt
     - (CLAB10H3) Greek and Latin for Scientists
     - CLAB20H3 The Classical World in Film
     - CLAC01H3 Selected Topics in Classical Literature
     - CLAC02H3 Selected Topics in Classical Civilization
     - CLAC05H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
     - CLAC11H3 Classical Literature I: Poetry if not taken as a required course
     - CLAC12H3 Classical Literature II: Prose if not taken as a required course
     - CLAC22H3 Religions of the Ancient Mediterranean
     - CLAC24H3 Multiculturalism and Cultural Identities in the Greek and Roman Worlds
     - CLAD05H3 Water Management in the Ancient Mediterranean World
   - **Art History**
     - VPHB41H3 The Human Figure in Greek Art (8th-4th cent. B.C.)
     - VPHB52H3 Ancient Art and Architecture (ca 900 B.C.-300 A.D.)
     - VPHB76H3 Religion in the Arts: The Judeo-Christian Traditions
     - VPHC46H3 Topics in Art of the Ancient World
     - VPHC53H3 The Silk Routes
   - **English**
     - ENGB30H3 Classical Myth and Literature
     - ENGC16H3 The Bible and Literature I
     - ENGC17H3 The Bible and Literature II
     - ENGC26H3 Drama: Tragedy
     - ENGC27H3 Drama: Comedy
   - **Languages**
     - LGGA50H3 Introductory Latin I
     - LGGA51H3 Introductory Latin II
     - LGGA54H3 Introductory Sanskrit I
     - LGGA55H3 Introductory Sanskrit II
     - LGGB54H3 Intermediate Sanskrit I
     - LGGB55H3 Intermediate Sanskrit II
   - **Music**
     - VPMC93H3 Orpheus
   - **Philosophy**
     - PHLB16H3 Political Philosophy: Ancient Greece and the Middle Ages
     - PHLB31H3 Introduction to Ancient Philosophy
     - PHLC32H3 Topics in Ancient Philosophy
   - **Religion**
     - (RLGB01H3) The "Holy Book" in Judaism, Christianity and Islam
     - (RLGC01H3) The Five Books of Moses
     - (RLGC02H3) The Gospels
     - (RLGC03H3) Paul and the Invention of Christianity
     - (RLGC04H3) Hindu Epic
     - RLG05H3 The Qu'ran in Interpretive and Historical Context
   - **Anthropology**
     - (ANTB04H3) Artifacts and Prehistory
     - (ANTB12H3) Introduction to World Prehistory: The Rise of Civilization

**Note:** Students who were enrolled at UTSC prior to the 2009 Summer Session may substitute one of (CLAA02H3) or (CLAA03H3) for CLAA06H3 in Requirement 3. Students who have both (CLAA02H3) & (CLAA03H3) may substitute one of the courses for CLAA04H3 in Requirement 1.
CLAA04H3 The Ancient Mediterranean World
An introduction to the main features of the ancient civilizations of the Mediterranean world from the development of agriculture to the spread of Islam. Long term socio-economic and cultural continuities and ruptures will be underlined, while a certain attention will be dedicated to evidences and disciplinary issues.  
Same as HISB07H3.  
Exclusion: HISB07H3  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAA05H3 Ancient Mythology I: Mesopotamia and Egypt
A study of Mesopotamian and Egyptian mythologies. Special attention will be dedicated to the sources through which these representational patterns are documented and to their influence on Mediterranean civilizations and arts.  
Exclusion: CLAA05H3 may not be taken after or concurrently with NMC380Y  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAA06H3 Ancient Mythology II: Greece and Rome
A study of Greek and Roman mythologies. Special attention will be dedicated to the sources through which these representational patterns are documented and to their influence on Mediterranean civilizations and arts.  
Exclusion: CLAA05H3 may not be taken after or concurrently with NMC380Y  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAB05H3 History and Culture of the Greek World
A survey of the history and culture of the Greek world from the Minoan period to the Roman conquest of Egypt (ca 1500-30 BC). Special attention will be dedicated to the nature, variety and limits of the available evidences, to socio-cultural interactions as well as to historical processes of continuities and ruptures.  
Same as HISB10H3.  
Exclusion: CLA204H, (CLAA02H3), (CLAA03H3)  
Recommended Preparation: CLAA05H3  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAB06H3 History and Culture of the Roman World
A survey of the history and culture of the ancient Roman world from the Etruscan period to the Justinian dynasty (ca 800 BC-600 AD). Special attention will be dedicated to the nature, variety and limits of the available evidences, to socio-cultural interactions as well as to historical processes of continuities and ruptures.  
Same as HISB11H3.  
Exclusion: CLA231H, HISB11H3  
Recommended Preparation: CLAB05H3  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAB20H3 The Classical World in Film
The representation of the classical world and historical events in film. How the Greek and Roman world is reconstructed by filmmakers, their use of spectacle, costume and furnishings, and the influence of archaeology on their portrayals. Films will be studied critically for historical accuracy and faithfulness to classical sources.  
Exclusion: CLA388H  
Recommended Preparation: CLAA05H3 or CLAA06H3 or (CLAA02H3) or (CLAA03H3)  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAC01H3 Selected Topics in Classical Literature
A detailed study of an author or a genre in Classical Literature in Translation. Topics will vary from session to session and will alternate between Greek and Roman Epic, Greek and Roman Tragedy and Greek and Roman Comedy.  
Prerequisite: One full credit in Classics or in English or another literature  
Exclusion: CLA300H  
Breadth Requirement: Arts, Literature & Language

CLAC02H3 Selected Topics in Classical Civilization
A detailed study of a theme in Classical Civilization. Topics will vary from session to session and may be drawn from such areas as the archaeological history of the Roman world, Greek and Roman religion, ancient education or Roman law.  
Prerequisite: One full credit in Classics or History  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAC05H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
This course provides a review of the environmental, social and economic features of Egypt from 332 BC to 642 AD.  
Same as IEEC52H3, HISC10H3.  
Prerequisite: Any 5 full credits including 1 full credit in Classical Studies or History.  
Exclusion: IEEC52H3, HISC10H3  
Recommended Preparation: CLAB05H3 & CLAB06H3  
Breadth Requirement: History, Philosophy & Cultural Studies

CLAC11H3 Classical Literature I: Poetry
An examination of the main genres, authors and works of ancient Greek and Latin poetry, with particular emphasis on epic, drama and lyrics. Attention will be dedicated to the study of how these works reflect the socio-cultural features of Classical Antiquity and influenced later literatures. Texts will be studied in translation.  
Prerequisite: One full credit in Classics or History  
Recommended Preparation: CLAA06H3  
Breadth Requirement: Arts, Literature & Language

CLAC12H3 Classical Literature II: Prose
An examination of the main genres, authors and works of ancient Greek and Latin prose. History, rhetoric, biography, letters and the novel will be studied. Attention will be dedicated to the study of how these works reflect the socio-cultural features of Classical Antiquity and influenced later literatures. Texts will be studied in translation.  
Prerequisite: One full credit in Classics or History  
Recommended Preparation: CLAA06H3 & CLAC11H3  
Breadth Requirement: Arts, Literature & Language

CLAC22H3 Religions of the Ancient Mediterranean
A comparative study of the Mesopotamian, Egyptian, Phoenician and Punic, Celtic, Palmyrene, Persian, Greco-Roman and Judeo-Christian religious beliefs and practices. Special attention will be dedicated to how they document the societies and cultures in which they flourished.  
Prerequisite: One full credit in Classics or Religion  
Exclusion: CLA366H, NMC380Y  
Recommended Preparation: CLAA05H3 & CLAA06H3  
Breadth Requirement: History, Philosophy & Cultural Studies
CLAC24H3 Multiculturalism and Cultural Identities in the Greek and Roman Worlds

A critical examination of multiculturalism and cultural identities in the Greek and Roman worlds. Special attention will be dedicated to the evidences through which these issues are documented and to their fundamental influence on the formation and evolution of ancient Mediterranean societies and cultures.

Same as HISC11H3.
Prerequisite: One full credit in Classics or History
Exclusion: HISC11H3
Recommended Preparation: CLAB05H3 & CLAB06H3

CLAD05H3 Water Management in the Ancient Mediterranean World

This seminar type course addresses issues related to the relationships between ancient Mediterranean societies and their hydric environments in the Mediterranean from 5000 BC to 600 AD.

Same as HISD10H3.
Prerequisite: Any 11 full credits including 2 full credits in Classical Studies or History.
Exclusion: HISD10H3
Recommended Preparation: CLAB05H3 & CLAB06H3
Enrolment Limits: 15

CLCG00H3 Supervised Study in Cognitive Science

Supervised reading or research project.

These courses provide an opportunity to pursue advanced study in a specialized area following the appropriate scheduled courses and in close consultation with the supervisor. They are not intended as a substitute for scheduled advanced courses. They are intensive research projects intended to provide laboratory/field experience in data collection and analysis. Projects must be completed over 2 consecutive terms. Regular consultation with the supervisor is necessary, and extensive data collection and analysis will be required. Such a project will culminate in a written research report. Students must first find a supervisor before the start of the academic term in which the project will be initiated. They must then obtain a permission form from the Department of Psychology’s website (www.utsc.utoronto.ca/psych/undergraduates) that is to be completed and signed by the intended supervisor, and returned to the Psychology Office. At that time, the student will be provided with an outline of the schedule and general requirements for the course, including the structure of the required log-book. Students seeking supervision off campus are further advised to check the appropriateness of the proposed advisor with the Program Supervisor. If the proposed supervisor is not appointed to the Psychology faculty at UTSC then a secondary advisor, who is appointed at UTSC, will be required.

Prerequisite: 3.0 credits at the B- or C-level in COG and/or LIN and/or PSY & permission of the supervisor.

Note: Normally students need a cumulative GPA of at least 2.7 for permission to be granted.

Enrolment Limits: Students are advised that they must obtain consent from the supervising instructor before registering for these course.
Computer Science

Faculty List

W.H. Enright, B.Sc. (U.B.C.), M.Sc., Ph.D. (Toronto), Professor
D.J. Fleet, B.Sc. (Queen’s), M.Sc., Ph.D. (Toronto), Professor
V. Hadzilacos, B.S.E. (Princeton), Ph.D. (Harvard), Professor
G. Hirst, B.A., B.Sc. (Monash), M.Sc. (A.N.U., U.B.C.), Ph.D. (Brown), Professor
M. Molloy, B.Math, M.Math (Waterloo), Ph.D. (Carnegie Mellon), Professor
N. Koudas, B.Sc. (Patras), M.Sc. (Maryland), Ph.D. (Toronto), Professor
R. Johnson, B.Sc. (Brigham Young), M.Sc., Ph.D. (Carnegie Mellon), Assistant Professor
B. Schroeder, M.Sc. (Saarbrucken), Ph.D. (Carnegie Mellon), Assistant Professor
A. Bretscher, B.Sc., M.Sc. (Queen’s), Ph.D. (Toronto), Senior Lecturer
N. Cheng, B.Sc. (Toronto), Senior Lecturer
R. Pancer, B.Sc., M.Sc., Ph.D. (Toronto), Senior Lecturer
A. Rosselet, B.Sc. (NCSU), M.Sc., Ph.D. (Toronto), Senior Lecturer
J. Estrada, B.Eng. (ITESM, Mex.), M.Sc., Ph.D. (Toronto), Lecturer
A. Tafliovich, Hon. B.Sc., M.Sc., Ph.D. (Toronto), Lecturer

Associate Chair: D. Fleet (416-287-5653)

Computer science is the study of the use of computers to process information. The form of this information may vary widely, from the business person's records or the scientist's experimental results to the linguist's texts. One of the fundamental concepts in computer science is the algorithm - a list of instructions that specify the steps required to solve a problem. Computer science is concerned with producing correct, efficient, and maintainable algorithms for a wide variety of applications. Closely related is the development of tools to foster these goals: programming languages for expressing algorithms; operating systems to manage the resources of a computer; and various mathematical and statistical techniques to study the correctness and efficiency of algorithms. Theoretical computer science is concerned with the inherent difficulty of problems that can make them intractable by computers. Numerical analysis, data management systems, computer graphics, and artificial intelligence are concerned with the applications of computers to specific problem areas.

Limited Enrolment: Because of pressures of demand for places, it has been necessary to place enrolment limits on most CSC courses and on admission to the Major and Specialist Programs. Information on how to apply for admission to a Program is given below.

Note on Admission to CSC Courses

CSC courses are open to all students who meet the prerequisites. Non-CSC program students who wish to take B-, C-, or D-level courses must meet additional cumulative GPA requirements:
• A student who is not in a CSC program and does not have a cumulative GPA of at least 2.5 may not take any B-level CSC course other than CSCB07H3.
• A student who is not in a CSC program and does not have a cumulative GPA of at least 3.0 may not take any C- or D-level CSC course.
• When a B-, C-, or D-level CSC course other than CSCB07H3 approaches its capacity, CSC program students will be given preference for further enrolment over non-CSC program students.
• Students admitted to the Major or Specialist Program in Computer Science at any point after first year, will be subject to retroactive program tuition fees.

Service Learning and Outreach (Previously known as Science Engagement)

For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

SPECIALIST PROGRAM IN COMPUTER SCIENCE (SCIENCE)

Supervisor of Studies: R. Pancer (416-287-7679) Email: pancer@utsc.utoronto.ca

Program Objectives

This program provides a working knowledge of the foundations of computer science: modern computer software and hardware, theoretical aspects of computer science, and relevant areas of mathematics and statistics. It also imparts an appreciation of the discipline’s transformative impact on science and society. The program prepares students for further study and for careers in the computing industry. It comprises three streams with different emphases:

The Comprehensive Stream provides a broad and balanced exposure to the discipline. It is the stream best-suited for students planning to pursue graduate study in computer science, but it is also suitable for other career paths.

The Software Engineering Stream places greater emphasis on the engineering side of the discipline, including computer systems and core applications.

The Information Systems Stream has a similar focus as the Software Engineering Stream, but it provides additional exposure to certain aspects of business management. It is of special interest to students wishing to pursue careers in technical management but who have deep interest in the technology.
Program Admission
Each year up to 150 students are admitted directly from high school to the Comprehensive Streams of this program and the Co- 
operative Specialist Program in Computer Science (see below) on the basis of academic performance. Applicants must have 
completed Grade 12 Calculus & Vectors and Advanced Functions. 
After first year, students may transfer from Comprehensive to other streams. Due to enrolment restrictions in required Management 
courses, entry to the Information Systems Stream is limited. Selection is based on grades in the program’s A-level courses, including 
the two A-level MGT courses in requirement 6 of the Information Systems Stream below. 
An additional number of students may transfer to the program after the first year. To be eligible for late entry to a stream of the 
program, a student must have completed all A-level courses required in that stream. Admission is based on Cumulative GPA (CGPA) 
and grades in computer science, mathematics, and statistics courses that the student has taken. The minimum CGPA for admissions is 
calculated annually.

Program Requirements: 
To remain in the program, a student must maintain a CGPA of 2 or higher throughout the program. To complete the program, a 
student must meet the course requirements described below. (One credit is equivalent to two courses). 
The program requirements comprise a core of 21 courses (10.5 credits), common to all streams and additional requirements which 
depend on the stream, for a total of 27 courses (13.5 credits) for the Comprehensive and Software Engineering Streams, and 30 
courses (15 credits) for the Information Systems Stream.

Note: Many Computer Science courses are offered both at U of T Scarborough and at the St. George campus. When a course is 
ofered at both campuses in a given session, U of T Scarborough students are expected to take that course at U of T Scarborough. The 
Department of Computer Science at the St. George campus cannot guarantee space for U of T Scarborough students in their courses, 
especially those offered at both campuses.

CORE (10.5 credits)
1. Writing Requirement (0.5 credit) *
   One of: ANTA01H3, ANTA02H3, (CLAA02H3), (CTLA19H3), CTLA01H3, ENGA10H3, ENGA11H3, ENGB06H3, ENGB07H3, 
   ENGB08H3, ENGB09H3, ENGB17H3, ENGB19H3, ENGB50H3, ENGB51H3, GGRA02H3, GGRA03H3, GGRB05H3, 
   GGRB06H3, (HISA01H3) HLTA01H3, HUMA01H3, (HUMA11H3), (HUMA17H3), (LGGA99H3), LINA01H3, PHLA10H3, 
   PHLA11H3, WSTA01H3.
   (*) It is recommended that this requirement be satisfied by the end of the second year.

2. A-level courses (3 credits) 
   CSCA08H3 Introduction to Computer Programming 
   CSCA48H3 Introduction to Computer Science 
   CSCA67H3 Discrete Mathematics for Computer Scientists 
   MATB24H3 Linear Algebra I 
   MATB31H3 Calculus I for Mathematical Sciences 
   MATB37H3 Calculus II for Mathematical Sciences

3. B-level courses (4 credits) 
   CSCB07H3 Software Design 
   CSCB09H3 Software Tools and Systems Software 
   CSCB36H3 Introduction to the Theory of Computation 
   CSCB58H3 Computer Organization 
   CSCB63H3 Design and Analysis of Data Structures 
   MATB24H3 Linear Algebra II 
   MATB41H3 Techniques of the Calculus of Several Variables I 
   STAB52H3 Introduction to Probability

4. C-level courses (2.5 credits) 
   CSCC43H3 Introduction to Databases 
   CSCC69H3 Operating Systems 
   CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics 
   CSCC63H3 Computability and Computational Complexity 
   CSCC73H3 Algorithm Design and Analysis

5. D-level course (0.5 credit) 
   CSCD03H3 Social Impact of Information Technology
A. Comprehensive Stream
This stream requires a total of 27 courses (13.5 credits). In addition to the core requirements 1-5 common to all streams, 6 other distinct courses (3 full credits) must be chosen satisfying all of the following requirements:

6. Additional required courses (1 credit)
CSCC24H3 Principles of Programming Languages
CSCD37H3 Analysis of Numerical Algorithms for Computational Mathematics

7. Electives from courses on computer systems and applications (1 credit)
Two of:
CSCC01H3 Introduction to Software Engineering
CSCC09H3 Programming on the Web
CSCC85H3 Introduction to Embedded Systems
CSCD01H3 Engineering Large Software Systems
CSCD11H3 Machine Learning and Data Mining
CSCD18H3 Computer Graphics
CSCD27H3 Computer and Network Security
CSCD43H3 Database System Technology
CSCD58H3 Computer Networks
CSCD84H3 Artificial Intelligence
CSC318H Design of Interactive Computational Media
CSC320H Visual Computing
CSC321H Introduction to Neural Networks and Machine Learning
CSC401H Natural Language Computing
CSC469H Operating Systems Design and Implementation
CSC485H Computational Linguistics
CSC488H Compilers and Interpreters

8. Electives from courses related to the theory of computing (0.5 credit)
One of:
MATC09H3 Introduction to Mathematical Logic
MATC16H3 Coding Theory and Cryptography
MATC32H3 Graph Theory and Algorithms for its Applications
MATC44H3 Introduction to Combinatorics
CSC438H Computability and Logic
CSC448H Formal Languages and Automata
CSC465H Formal Methods in Software Design

9. CSC, MAT, or STA elective (0.5 credit)
One of:
C- or D-level CSC, MAT, or STA course, excluding MATC82H3, MATC90H3, and STAD29H3

B. Software Engineering Stream
This stream requires a total of 27 courses (13.5 credits). In addition to the core requirements 1-5 common to all streams, 6 other distinct courses (3 full credits) must be chosen satisfying all of the following requirements:

6. Additional required courses (1.5 credits)
CSCC01H3 Introduction to Software Engineering
CSCC24H3 Principles of Programming Languages
CSCD01H3 Engineering Large Software Systems

7. Electives from courses on computer systems and applications (1.5 credits)
Three of:
CSCC09H3 Programming on the Web
CSCC85H3 Introduction to Embedded Systems
CSCD11H3 Machine Learning and Data Mining
CSCD18H3 Computer Graphics
CSCD27H3 Computer and Network Security
CSCD43H3 Database System Technology
CSCD58H3 Computer Networks
CSCD84H3 Artificial Intelligence
CSC318H Design of Interactive Computational Media
CSC320H Visual Computing
CSC321H  Introduction to Neural Networks and Machine Learning
CSC401H  Natural Language Computing
CSC469H  Operating Systems Design and Implementation
CSC485H  Computational Linguistics
CSC488H  Compilers and Interpreters

C. Information Systems Stream
This stream requires a total of 30 courses (15 credits). In addition to the core requirements 1-5 common to all streams, 9 other distinct courses (4.5 full credits) must be chosen satisfying all of the following requirements:

6. Required management courses (2 credits)
   MGTA03H3  Introduction to Management I
   MGTA04H3  Introduction to Management II
   MGTB23H3  Managing People in Organizations
   MGTB29H3  Managing Groups and Organizations

7. Additional required computer science courses (1.5 credits)
   CSCC01H3  Introduction to Software Engineering
   CSCD01H3  Engineering in Large Software Systems
   CSCD43H3  Database System Technology

8. Electives from courses on computer systems and applications (1 credit)
   Two of:
   CSCC09H3  Programming on the Web
   CSCC85H3  Introduction to Embedded Systems
   CSD111H3  Machine Learning and Data Mining
   CSD18H3  Computer Graphics
   CSD27H3  Computer and Network Security
   CSD58H3  Computer Networks
   CSD84H3  Artificial Intelligence
   CSC318H  Design of Interactive Computational Media
   CSC320H  Visual Computing
   CSC321H  Introduction to Neural Networks and Machine Learning
   CSC401H  Natural Language Computing
   CSD469H  Operating Systems Design and Implementation
   CSD485H  Computational Linguistics
   CSC488H  Compilers and Interpreters

SPECIALIST (CO-OPERATIVE) PROGRAM IN COMPUTER SCIENCE
Supervisor of Studies: R. Pancer (416-287-7679) Email: pancer@utsc.utoronto.ca
Co-op Contact: askcoop@utsc.utoronto.ca

Program Objectives
This program combines the coursework of the Specialist Program in Computer Science described above with paid work terms in public and private enterprises. It shares the goals and structure of the Specialist Program in Computer Science, including its three streams (Comprehensive, Software Engineering, and Information Technology), but complements study of the subject with considerable work experience.

Program Admission
Refer to the Program Admission requirements for the Specialist Program in Computer Science described above and the Co-operative Programs section in this Calendar. Students entering this program after first year must have a CGPA of at least 2.75.

Program Requirements
To remain in the program, a student must maintain a cumulative GPA of 2.5 or higher throughout the program. To complete the program, a student must meet the work term and course requirements described below.

Work Term Requirements
Students must successfully complete three work terms, at most one of which can be during the summer. In addition, prior to their first work term, students must successfully complete the Arts & Science Co-op Work Term Preparation Activities. These include networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations.

Course Requirements
The Co-operative Program can be taken in conjunction with any of the streams in the Specialist Program in Computer Science. For the course requirements of each stream, please refer to the description of the Specialist Program in Computer Science.
MAJOR PROGRAM IN COMPUTER SCIENCE (SCIENCE)
Supervisor of Studies: R. Pancer (416-287-7679) Email: pancer@utsc.utoronto.ca

Program Objectives
This Program provides basic knowledge of the foundations of computer science: modern computer software and hardware, theoretical aspects of computer science, and relevant areas of mathematics and statistics. This program is intended to be combined with other programs, typically a major program in another discipline.

Program Admission
Students are admitted to the second year of the program. All A-level courses required for the program must have been completed (see requirement 1 below). Admission is based on Cumulative GPA (CGPA) and grades in computer science and mathematics courses that the student has taken. The minimum CGPA for admission is calculated annually.

Program Requirements
This Program requires a total of 16 distinct courses (8 credits) satisfying all of the following requirements listed below.

1. A-level courses (3 credits)
   - CSCA08H3 Introduction to Computer Programming
   - CSCA48H3 Introduction to Computer Science
   - CSCA67H3 Discrete Mathematics for Computer Scientists
   - MATA23H3 Linear Algebra I
   - MATA31H3 Calculus I for Mathematical Sciences
   - MATA37H3 Calculus II for Mathematical Sciences

2. B-level courses (3 credits)
   - CSCB07H3 Software Design
   - CSCB09H3 Software Tools and Systems Programming
   - CSCB36H3 Introduction to the Theory of Computation
   - CSCB58H3 Computer Organization
   - CSCB63H3 Design and Analysis of Data Structures
   - One of: (*)
     - MATB24H3 Linear Algebra II
     - STAB52H3 Introduction to Probability
   (*): In making this choice, students should consider the prerequisites of courses they plan to take to satisfy requirements 3-4.

3. C-level courses in numerical computation and theory of computing (1 credit)
   - CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
   - One of:
     - CSCC63H3 Computability and Computational Complexity
     - CSCC73H3 Algorithm Design and Analysis

4. Electives (1 credit)
   - Two of:
     - Any C-or D-level CSC courses.

Writing Recommendation:
Students are urged to take a course from the following list of courses by the end of their second year: ANTA01H3, ANTA02H3, (CLA1A02H3), (CTLA19H3), CTLA01H3, ENGA10H3, ENGA11H3, ENGB06H3, ENGB07H3, ENGB08H3, ENGB17H3, ENGB19H3, ENGB50H3, ENGB51H3, GGRA02H3, GGRA03H3, GGRB05H3, (HISA01H3), HLT0A1H3, HUMA01H3, (HUMA11H3), (HUMA17H3), (LGGA99H3), LINA01H3, PHLA10H3, PHLA11H3, WSTA01H3.

MAJOR CO-OPERATIVE PROGRAM IN COMPUTER SCIENCE (SCIENCE)
Supervisor of Studies: R. Pancer (416-287-7679) E-mail: pancer@utsc.utoronto.ca
Co-op Contact: askcoop@utsc.utoronto.ca
Program Objectives
This program combines the coursework of the Major Program in Computer Science described above with paid work terms in public and private enterprises. It shares the objectives of the Major Program in Computer Science, but complements study of the subject with considerable work experience. This program must be combined with a major program in another discipline.

Program Admission
Refer to the Program Admission requirements for the Major Program in Computer Science described above and the Co-operative Programs section in this Calendar. Students entering this program must have a CGPA of at least 2.75.

Program Requirements
To remain in the program, a student must maintain a cumulative GPA 2.5 or higher throughout the program. To complete the program, a student must meet the work term and course requirements described below.

Work Term Requirements
Students must successfully complete three work terms, at most one of which can be during the summer. In addition, prior to their first work term, students must successfully complete the Arts & Science Co-op Work Term Preparation Activities. These include networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work expectations.

Course Requirements
The course requirements of the Co-operative Major Program in Computer Science are identical to those of the Major Program in Computer Science described above.

MINOR PROGRAM IN COMPUTER SCIENCE (SCIENCE)
Supervisor of Studies: R. Pancer (416-287-7679) Email: pancer@utsc.utoronto.ca

Program Objectives
This program provides a basic introduction to the tools and methodologies of computer science and equips students with the knowledge necessary to use these tools and methodologies as they relate to other subjects. The program is intended to complement programs in other disciplines.

Program Requirements
This program may not be combined with any Major or Specialist Program in Computer Science, Mathematics or Statistics. It requires 4.0 full credits as follows:

1. **Introductory programming courses** (1 credit)
   - CSCA20H3 Computer Science for the Sciences
   - CSCA48H3 Introduction to Computer Science
   (*) CSCA08H3 may be substituted for CSCA20H3 with permission of the program supervisor

2. **Basic Mathematics courses** (0.5 credits)
   **One of:**
   - CSCA67H3 Discrete Mathematics for Computer Scientists
   - MAT23H3 Linear Algebra I
   - MAT20H3 Calculus I for Biological and Physical Sciences
   - MAT21H3 Calculus I for Mathematical Sciences
   - MAT22H3 Calculus for Management I
   - PHLB50H3 Symbolic Logic I

3. **Intermediate programming, systems, and theory courses** (1.5 credits)
   **Three of:**
   - CSCB07H3 Software Design
   - CSCB09H3 Software Tools and System Programming
   - CSCB20H3 Introduction to Databases and Web Applications
   - CSCB36H3 Introduction to the Theory of Computation(**)
   - CSCB58H3 Computer Organization
   - CSCB63H3 Design and Analysis of Data Structures (***)
   (***) requires CSCA67H3
   (**) requires CSCB36H3

4. **CSC electives** (1 credit)
   **Two of:**
   - Any C- or D-level CSC course (†)
CSCA08H3 Introduction to Computer Programming
Structure of computers; the computing environment. Programming in an object-oriented language such as Python. Program structure: elementary data types, statements, control flow, functions, classes, objects, methods, fields. Lists; searching, sorting and complexity. Prerequisite: Any Grade 12 mathematics course. Note: This course is intended for students with no prior exposure to computer programming. Students who have sufficient programming experience may enrol directly in CSCA48H3; consult the instructor or the Supervisor of Studies for guidance. Exclusion: CSCA20H3, CSC108H, CSC120H. CSCA08H3 may not be taken after or concurrently with CSCA48H3. Breadth Requirement: Quantitative Reasoning

CSCA20H3 Computer Science for the Sciences
An introduction to computer science for students in other sciences, with an emphasis on gaining practical skills. Introduction to programming; web programming; database design; software tools; examples and exercises taken from the sciences. At the end of this course you will be able to develop computer tools for scientific applications, such as the structuring and analysis of experimental data. Exclusion: CSCA08H3, CSC108H, CSC120H. CSCA08H3 may not be taken after or concurrently with CSCA48H3. Breadth Requirement: Quantitative Reasoning

CSCA48H3 Introduction to Computer Science
Abstract data types and data structures for implementing them. Linked data structures. Encapsulation and information-hiding. Object-oriented programming. Specifications. Analyzing the efficiency of programs. Recursion. Prerequisite: CSCA08H3 & Grade 12 Calculus & Vectors & one other Grade 12 mathematics course. Note: This course assumes programming experience in an object-oriented language such as Python, C++ or Java, as provided by CSCA08H3. Students who already have this background may consult the instructor or Supervisor of Studies for advice about skipping CSCA08H3. Students who enrol in CSCA48H3 and find the course too difficult may "drop down" to CSCA08H3 in sessions when CSCA08H3 is offered. The deadline for "dropping down" is the end of the fifth week of classes. Exclusion: CSC148H3 Breadth Requirement: Quantitative Reasoning

CSCA67H3 Discrete Mathematics for Computer Scientists
Introduction to discrete mathematics: Elementary combinatorics; discrete probability including conditional probability and independence; graph theory including trees, planar graphs, searches and traversals, colouring. The course emphasizes topics of relevance to computer science, and exercises problem-solving skills and proof techniques such as well ordering, induction, contradiction, and counterexample. Prerequisite: Grade 12 Calculus and Vectors & one other Grade 12 mathematics course

CSCB07H3 Software Design
An introduction to software design and development concepts, methods, and tools, using a statically-typed object-oriented language such as Java. Topics from: version control, build management, unit testing, refactoring, design patterns, advanced IDE usage, regular expressions, mark up languages, parsing using finite state machines, and reflection. Prerequisite: CSCA48H3 Corequisite: (CSCA65H3) Exclusion: CSC207H Breadth Requirement: Quantitative Reasoning

CSCB09H3 Software Tools and Systems Programming
Software techniques in a Unix-style environment, using scripting languages and a machine-oriented programming language (typically C). What goes on in the system when programs are executed. Core topics: creating and using software tools, pipes and filters, file processing, shell programming, processes, system calls, signals, basic network programming. Prerequisite: CSCA48H3 & [CGPA 2.5 or enrolment in a CSC Subject POSt] Exclusion: CSC209H Breadth Requirement: Quantitative Reasoning

CSCB20H3 Introduction to Databases and Web Applications
A practical introduction to databases and Web app development. Databases: terminology and applications; creating, querying and updating databases; the entity-relationship model for database design. Web documents and applications: static and interactive documents; Web servers and dynamic server-generated content; Web application development and interface with databases. Prerequisite: Some experience with programming in an imperative language such as Python, Java, or C. Exclusion: This course may not be taken after or concurrently with any C-or D-level CSC course. Recommended Preparation: CSCA08H3 or CSCA20H3 Breadth Requirement: Quantitative Reasoning

CSCB29H3 Concepts in Elementary Computer Science
A course specifically for students intending to become elementary or high school teachers. Computer science concepts will be discussed at a fundamental level. Topics covered: problem solving, algorithms, recursion, applications, connections to mathematics, connections to society. Throughout the course, students will apply these concepts to fit the current Ministry's Guidelines for the various grade levels. Students may
be required to teach some one-hour classes to various grade levels in an approved school. This is a "teaching friendly" course. The course will be broken up into three distinct topics: elementary level (grades K-5), intermediate (grades 6-9), senior (grades 10-12).

Prerequisite: [CSCA08H3 or CSCA20H3 or PSCB57H3] & 3 other full credits & a cumulative CGPA of at least 2.5. Priority will be given to ETP/CTEP students. Note: This course assumes programming experience in a language such as Python, C++ or Java as provided by CSCA08H3. Students who already have this background may consult the instructor or Supervisor of Studies for advice about skipping CSCA08H3/CSCA20H3/PSCB57H3.

Exclusion: This course may not be taken after or concurrently with any C- or D-level Computer Science course.

Breadth Requirement: Quantitative Reasoning

CSCB36H3 Introduction to the Theory of Computation

Mathematical induction with emphasis on applications relevant to computer science. Aspects of mathematical logic, correctness proofs for iterative and recursive algorithms, solutions of linear and divide-and-conquer recurrences, introduction to automata and formal languages.

Prerequisite: CSCA48H3 & (CSCA65H3) & [CGPA 2.5 or enrolment in a CSC Subject POSI]

Exclusion: CSC236H, CSC240H

Breadth Requirement: Quantitative Reasoning

CSCB38H3 Computer Organization

Principles of the design and operation of digital computers. Binary data representation and manipulation, Boolean logic components of computer systems, memory technology, peripherals, structure of a CPU, assembly languages, instruction execution, and addressing techniques. There are a number of laboratory periods in which students conduct experiments with digital logic circuits.

Prerequisite: [CSCA48H3 or PSCB57H3] & [CGPA 2.5 or enrolment in a CSC Subject POSI]

Exclusion: CSC258H

Breadth Requirement: Quantitative Reasoning

CSCB63H3 Design and Analysis of Data Structures


Prerequisite: CSCB07H3 & CSCB36H3 & [CGPA 2.5 or enrolment in a CSC Subject POSI]

Exclusion: CSC263H, CSC265H

Breadth Requirement: Quantitative Reasoning

CSCC01H3 Introduction to Software Engineering

Introduction to software development methodologies with an emphasis on agile development methods appropriate for rapidly-moving projects. Basic software development infrastructure; requirements elicitation and tracking; prototyping; basic project management; basic UML; introduction to software architecture; design patterns; testing.

Prerequisite: CSCB07H3, CSCB09H3 & [CGPA 3.0 or enrolment in a CSC Subject POSI]

Exclusion: CSC301H, (CSCC40H3), (CSCD08H3)

Breadth Requirement: Quantitative Reasoning

CSCC09H3 Programming on the Web


Prerequisite: CSCB09H3 & CSCC43H3 & [CGPA 3.0 or enrolment in a CSC Subject POSI]

Exclusion: CSC309H

Breadth Requirement: Quantitative Reasoning

CSCC24H3 Principles of Programming Languages

Major topics in the design, definition, analysis, and implementation of modern programming languages. Study of programming paradigms: procedural (e.g. C, Java, Python), functional (e.g. Scheme, ML, Haskell), and logic programming (e.g. Prolog, Mercury).

Prerequisite: CSCB07H3 & CSCB09H3 & [CGPA 3.0 or enrolment in a CSC Subject POSI]

Exclusion: CSC324H

Breadth Requirement: Quantitative Reasoning

CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics

An introduction to computational methods for solving problems in linear algebra, non-linear equations, approximation and integration, Floating-point arithmetic; numerical algorithms; application of numerical software packages.

Prerequisite: [MATA36H3 or MATA37H3] & [MATB23H3 & [CGPA 3.0 or enrolment in a CSC Subject POSI]

Exclusion: (CSCC36H3), (CSCC50H3), (CSCC51H3), CSC336H, CSC350H, CSC351H, CSC338H

Breadth Requirement: Quantitative Reasoning

CSCC43H3 Introduction to Databases

Introduction to database management systems. The relational data model. Relational algebra. Querying and updating databases: the SQL query language. Application programming with SQL. Integrity constraints, normal forms, and database design. Elements of database system technology: query processing, transaction management.

Prerequisite: CSCB09H3 & CSCB63H3 & [CGPA 3.0 or enrolment in a CSC Subject POSI]

Exclusion: CSC343H

Breadth Requirement: Quantitative Reasoning

CSCC63H3 Computability and Computational Complexity

Introduction to the theory of computability: Turing machines, Church's thesis, computable and non-computable functions, recursive and recursively enumerable sets, reducibility. Introduction to complexity theory: models of computation, P, NP, polynomial time reducibility, NP-completeness, further topics in complexity theory.

Note: Although the courses CSCC63H3 & CSCC73H3 may be taken in any order, it is recommended that CSCC63H3 be taken first.
Prerequisite: CSCB36H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC363H, CSC365H, CSC364H
Breadth Requirement: Quantitative Reasoning

CSCC69H3 Operating Systems
Principles of operating systems. The operating system as a control program and as a resource allocator. The concept of a process and concurrency problems: synchronization, mutual exclusion, deadlock. Additional topics include memory management, file systems, process scheduling, threads, and protection.
Prerequisite: CSCB07H3 & CSCB09H3 & CSCB58H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC369H
Breadth Requirement: Quantitative Reasoning

CSCC85H3 Introduction to Embedded Systems
The course covers the components and fundamental principles of operation of systems built around micro-processing elements: the architecture, operation, and types of micro-processing components; sensors, actuators, signal acquisition and processing, and basic principles of control theory. Laboratory sessions involving the use of a mobile robotic platform provide hands-on experience.
Prerequisite: CSCB58H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC373H, CSC375H, CSC364H
Breadth Requirement: Quantitative Reasoning

CSCD03H3 Social Impact of Information Technology
The trade-offs between benefits and risks to society of information systems, and related issues in ethics and public policy. Topics will include safety-critical software; computational invasion of privacy; computer-based crime; and professional ethics in the software industry. There will be an emphasis on current events relating to these topics.
Prerequisite: 14.0 full credits including CSAC08H3 or PSCB57H3 or CSCA48H3 [or, in special cases, (CSAC02H3) & permission of the instructor]
Exclusion: CSC300H
Breadth Requirement: Social & Behavioural Sciences

CSCD11H3 Machine Learning and Data Mining
Prerequisite: MATB24H3 & MATB41H3 & STAB52H3 & CSC373H & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC411H
Breadth Requirement: Quantitative Reasoning

CSCD18H3 Computer Graphics
Identification and characterization of objects manipulated in computer graphics, operations on these objects, efficient algorithms to perform these operations, and interfaces to transform one type of object to another. Display devices, display data structures and procedures, graphical input, object modeling, transformations, illumination models, light effects; graphics packages and systems.
Prerequisite: MATB24H3 & MATB42H3 & [CSCB09H3 or proficiency in C] & CSCC37H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC418H
Breadth Requirement: Quantitative Reasoning

CSCD27H3 Computer and Network Security
Public and symmetric key algorithms and their application; key management and certification; authentication protocols; digital signatures and data integrity; secure network and application protocols; application, system and network attacks and defences; intrusion detection and prevention; social engineering attacks; risk assessment and management.
Prerequisite: CSCB09H3 & CSCB36H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC427H
Recommended Preparation: CSCC69H
Breadth Requirement: Quantitative Reasoning

CSCD37H3 Analysis of Numerical Algorithms for Computational Mathematics
Most mathematical models of real systems cannot be solved analytically and the solution of these models must be approximated by numerical algorithms. The efficiency, accuracy and reliability of numerical algorithms for several classes of models will be considered. In particular models involving least squares, non-linear equations, optimization, quadrature, and systems of ordinary differential equations will be studied.
Prerequisite: CSCC37H & MATB24H3 & MATB41H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: (CSCC50H3), (CSCC51H3), CSC350H, CSC351H
Breadth Requirement: Quantitative Reasoning

CSCD43H3 Database System Technology
Concurrent Teacher Education

Courses: CTEB01H3, CTEC01H3, PSYB21H3
Web address: www.utsc.utoronto.ca/ctep
CTEP Co-ordinator: S. Syed (416-208-2796, Room #AA130) Email: s syed@utsc.utoronto.ca
CTEP Academic Advisor (French): Email: ctep-french-program-supervisor@utsc.utoronto.ca
CTEP Academic Advisor (Mathematical Sciences): X. Jiang Email: jiang@utsc.utoronto.ca
CTEP Academic Advisor (Physical Sciences): C. Dyer Email: dyer@utsc.utoronto.ca

The Concurrent Teacher Education Program (CTEP) is a partnership between the Ontario Institute for Studies in Education (OISE) and six other academic units of the University of Toronto, including the University of Toronto Scarborough, which allows students interested in a career in teaching to complete two undergraduate degrees at the same time during five years of full-time study. Upon successful completion of the program, U of T Scarborough students will earn both a Bachelor of Education and either an Honours Bachelor of Arts or an Honours Bachelor of Science and will be recommended for certification as elementary or secondary teachers in Ontario.

There are two CTEP options at U of T Scarborough:

a. CTEP/Arts - French: This program prepares students to become teachers at the primary-junior level (Kindergarten to Grade 6) or the intermediate-secondary level (Grades 7 to 12).
b. CTEP/Science - Mathematical & Physical Sciences: This program prepares students to become teachers at the primary-junior level (Kindergarten to Grade 6) or the intermediate-secondary level (Grades 7 to 12).

**Prerequisite:** CSCC43H3 & CSCC69H3 & CSCC73H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC443H
Breadth Requirement: Quantitative Reasoning

**CSCD58H3 Computer Networks**

Computer communication network principles and practice. The OSI protocol-layer model; Internet application layer and naming; transport layer and congestion avoidance; network layer and routing; link layer with local area networks, connection-oriented protocols and error detection and recovery; multimedia networking with quality of service and multicasting. Principles in the context of the working-code model implemented in the Internet.

Prerequisite: CSCB58H3 & CSCB63H3 & [STAB52H3 or STAB57H3] & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC458H
Breadth Requirement: Quantitative Reasoning

**CSCD71H3 Topics in Computer Science**

A topic from computer science, selected by the instructor, will be covered. The exact topic will typically change from year to year.

Prerequisite: Permission of the instructor & [CGPA 3.0 or enrolment in a CSC Subject POSt]. Normally intended for students who have completed at least 8.0 full credits.

**CSCD72H3 Topics in the Theory of Computing**

A topic from theoretical computer science, selected by the instructor, will be covered. The exact topic will typically change from year to year.

Prerequisite: Permission of the instructor & [CGPA 3.0 or enrolment in a CSC Subject POSt]. Normally intended for students who have completed at least 8.0 full credits.

**CSCD84H3 Artificial Intelligence**

A study of the theories and algorithms of Artificial Intelligence. Topics include a subset of: search, game playing, logical representations and reasoning, planning, natural language processing, reasoning and decision making with uncertainty, computational perception, robotics, and applications of Artificial Intelligence. Assignments provide practical experience of the core topics.

Prerequisite: CSCC24H3 & STAB52H3 & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Exclusion: CSC484H, CSC384H
Breadth Requirement: Quantitative Reasoning

**CSCD94H3 Computer Science Project**

A significant project in any area of computer science. The project may be undertaken individually or in small groups. This course is offered by arrangement with a computer science faculty member, at U of T Scarborough or the St. George campus. This course may be taken in any session and the project must be completed by the last day of classes in the session in which it is taken. Students must obtain consent from the Supervisor of Studies before registering for this course.

Prerequisite: [Three C-level computer science half-courses] & [permission of the Supervisor of Studies] & [CGPA 3.0 or enrolment in a CSC Subject POSt]
Enrolment procedures: Project supervisor's note of agreement must be presented to the Supervisor of Studies, who must issue permission for registration.
Exclusion: CSC494H

**CSCD95H3 Computer Science Project**

Same description as CSCD94H3. Normally a student may not take two project half-courses on closely related topics or with the same supervisor. If an exception is made allowing a second project on a topic closely related to the topic of an earlier project, higher standards will be applied in judging it. We expect that a student with the experience of a first project completed will be able to perform almost at the level of a graduate student.

Prerequisite: CSCD94H3

Note: Students must obtain consent from the Supervisor of.
Teaching Subjects

**Intermediate/Secondary (I/S):** Students must have two teaching subjects, the main teaching (also called anchor subject) and a second teaching subject.

**Primary/Junior (P/J):** Students must have one anchor subject but they do not need a second teaching subject (although it is recommended). As P/J teachers, they will cover many topics in the curriculum and should have knowledge of a range of areas.

Students declare their anchor and second subjects and teaching level (primary/junior or intermediate/secondary) in the session following attainment of their 4th credit.

- **Anchor subjects:** For students admitted to CTEP/Arts, the anchor subject is French as A Second Language. For students admitted to CTEP/Science, the anchor subject is one of Mathematics, Science-Chemistry or Science-Physics.

- **Second teaching subjects:** Eligible second subjects at UTSC are: Computer Studies, Economics, Dramatic Arts, Visual Art, French as a Second Language, English, Geography, History, Politics, Social Sciences-General, Mathematics, Science-Biology, Science-General, Science-Physics, Science-Chemistry.

Other second teachable options may be available. Consult with CTEP academic advisors if you are interested in completing a second teachable not listed above.

Upon receiving their fourth full credit, students also select the specialist or major programs that are associated with their anchor subject.

**Specialist and Major Programs Associated with Anchor Subjects**

(See the Chemistry, French, Mathematics, Physical Sciences, Physics or Statistics section of this Calendar for specific program requirements.)

**CTEP/Arts**
- a. Specialist Program in French

**CTEP/Science**
- Specialist Program in Biological Chemistry
- Specialist Program in Chemistry
- Specialist Program in Environmental Physics
- Specialist Program in Mathematics
- Specialist Program in Physical and Mathematical Sciences
- Specialist Program in Physics and Astrophysics
- Specialist Program in Quantitative Analysis

- Two approved major programs, one of which must be from the following list:
  - a. Major Program in Physics and Astrophysics
  - b. Major Program in Biochemistry
  - c. Major Program in Chemistry
  - d. Major Program in Mathematics
  - e. Major Program in Physical Sciences
  - f. Major Program in Statistics

**Note:** If available, students are encouraged to enrol in a major or minor program associated with their second teaching subject.

**Admissions**

In most cases, students apply to enter CTEP either directly from secondary school or after their first year of university studies.

**Prospective Applicants:** For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty, applicants must indicate the special code for the program on the Application for Admission to an Ontario University. See the Admissions section of this Calendar for more information and deadlines.

Upon receiving the application, the University of Toronto's Admissions office will send the applicant a confirmation letter and Applicant Instruction Guide. At this stage CTEP applicants will be required to complete an on-line Application Profile.

**Note:** Students transferring from a first year CTEP program at another U of T faculty (i.e., outside of UTSC) to second year UTSC CTEP will not have to complete an applicant profile.

**Current U of T Scarborough Students:** Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. Admission is competitive. Applications will be considered from students who:

- a. Are enrolled in an eligible specialist or major program.
- b. Have at least 4.0 credits including the recommended first year courses for the appropriate specialist or major program.
- c. Have a cumulative GPA of at least 2.50.
Academic status in CTEP

Note: These rules are over and above the rules governing overall standing at UTSC as described in the Overall Standing section of this Calendar and apply to the Honours Bachelor of Arts or Honours Bachelor of Science part of CTEP.

Academic status within CTEP will be determined as follows at the end of each Winter Session for all students who have attempted at least eight full credits since beginning their studies in their degree.

1. In good standing in CTEP
   Students who maintain a cumulative grade point average of 2.50 or better are said to be "in good standing" in CTEP.

2. On probation in CTEP
   Students who have attempted at least eight full credits and have a cumulative GPA below 2.50 will be placed on probation in CTEP.

3. Probation in CTEP cleared
   Students may clear probation by achieving a cumulative GPA of at least 2.50. Students who have cleared probation shall be said to be again in good standing in CTEP.

4. Probation in CTEP continued
   Students may continue on probation in CTEP by achieving an annual (Fall/Winter) GPA of at least 2.50 until such time as they return to good standing. Students who fail to meet this requirement will be allowed to continue on probation if they have a cumulative GPA above 2.50 in the best 75% of their courses.

5. Required to withdraw from CTEP
   The following students will be required to withdraw from CTEP:
   a) Any student on probation in CTEP who fails to achieve an annual GPA of at least 2.50 or who fails to achieve a cumulative GPA of at least 2.50 in the best 75% of their courses.
   b) Any student who, under the general rules governing overall standing, incurs a suspension.
   c) Any student who fails to meet OISE's standards for continued enrolment in the B.Ed. program.

Program Requirements
The program requires completion of:
• An Honours Bachelor of Arts or an Honours Bachelor of Science degree (see the degrees section of this Calendar for specific degree requirements) including:

1. Students must complete 5 full credits per year unless a CTEP advisor recommends otherwise.
2. Completion of an approved specialist program or of two approved major programs.
3. The following education focused courses:
   a. PSYB21H3 (Introduction to Developmental Psychology: Focus on Education) will normally be taken in year 1 of CTEP; all students admitted to CTEP at UTSC in year 2 should take PSYB21H3 in year 2 of their program; students in the 2011-12 cohort who have not completed PSYB21H3 should take it in year 2 of their program.
   b. CTEB01H3 (Equity and Diversity in Education) will normally be taken in year 2; all students admitted to CTEP at UTSC in year 2 should take CTEB01H3 in year 3 of their program; students in the 2011-12 cohort who have not completed CTEB01H3 in year 2 should take it in year 3 of their program.
   c. CTEC01H3 (Communication and Conflict Resolution) will normally be taken in year 3 of the program.
   d. CTEP Anchor subject internship in a school or community organization to be taken between September of year 3 and December of year 4 (100 hours in the field).

Bachelor of Education
Students who choose, or are required, to withdraw from CTEP will be allowed to transfer to a non-CTEP Honours Bachelor of Arts or Honours Bachelor of Science, will retain credit for all courses except the internship in d) above and the Bachelor of Education courses.

A Bachelor of Education degree which requires completion of 5.0 full credits is described below for students in the 2010-11 cohort (year 2 of the program) and beyond:

1. Year 3: Principles of Teaching: Legal, Ethical and Professional (0.5 credit).
2. Year 3: Inclusive Education: ESL and Exceptional Learners (0.5 credit) which includes 12-20 hour field experience focused on observation/tutoring.*
3. Year 4: Psychological Foundations of Learning (0.5 credit).**
4. Year 4: Social Foundations of Teaching and Schooling (0.5 credit).**
5. Year 4: Mentored Inquiry and Teaching (0.25 credit) with 10-15 days spent in schools.**
6. Year 4: Curriculum, Instruction and Assessment#1 (1.0 credit).**
7. Year 4: Practicum placement in schools (0.25 credit), 35-40 days, 3.5 days per week, Winter session.**
8. Year 5: Mentored Inquiry and Teaching (0.25 credit) with 10-15 days spent in schools.
9. Year 5: Curriculum, Instruction and Assessment#2 (1.0 credit).
10. Year 5: Practicum placement in schools (0.25 credit), 25 days, 5 days per week, month of May to be taken in Year 5.
Over the course of the program, CTEP students will also develop a Portfolio, a collection of artifacts, assignments and reflective activities that mirror their growth as CTEP candidates from students to professionals. (For more information on these courses and OISE related CTEP requirements, see the OISE Calendar.)

(*) The 2011-12 and 2012-2013 first year cohorts, and cohorts joining the program after 2012-13, will be asked to take Principles of Teaching in year 3 (this course will include a 12-20 hour field experience in the 2013-2014 academic year, and thereafter). Additionally the 2011-12 and 2012-2013 first year cohorts, and cohorts joining the program after 2012-2013, will be asked to take Inclusive Education in year 4 of the program. These cohorts will have to complete a half credit for their B.A. or B.Sc. in year 5.

(**) B.Ed. courses currently offered in year 4 will be moved to year 5 for the 2011-12 and 2012-2013 first year student cohorts and cohorts joining the program thereafter.

**French Proficiency Test**

Students who have selected French as their first or second teaching subject, and are specializing at the I/S level, must attempt their French Proficiency test in May of year 3, or November of year 4. B.A. P/J students may also take the proficiency test.

**Graduation from CTEP**

In order to graduate from the CTEP program, students will be required:

1. To complete requirements of an Honours B.A. or an Honours B.Sc.;
2. To achieve a cumulative GPA of at least 2.50 in their best 15.0 credits in their B.A. or B.Sc. degree.
3. To complete the requirements of a B.Ed.

**CTEB01H3 Equity and Diversity in Education**

Focuses on raising awareness and sensitivity to issues related to equity, diversity and inclusion facing teachers and students in diverse schools and cultural communities. It includes field experience that entails observation of, and participation in equity and diversity efforts in a culturally-rooted school and/or community organization. (Note: course includes 12-20 hours of field placements.)

Prerequisite: PSYB21H3
Exclusion: CTE200H
Enrolment Limits: Restricted to CTEP students
Breadth Requirement: History, Philosophy & Cultural Studies

**CTEC01H3 Communication and Conflict Resolution**

This course will provide theoretical knowledge about small-group interactions and their application for interpersonal communication and conflict resolution. First, we will study the role of status characteristics, cross-cultural variation in communication, and the emergence of power as they relate to the etiology of conflict. How the same facts can be re-organized in conflict management and resolution will be the focus in the second half of the course. Students will work on case studies and write reports about them.

Prerequisite: CTEB01H3 & PSYB21H3
Exclusion: CTE250H
Enrolment Limits: 35  Restricted to CTEP students.
Breadth Requirement: Social & Behavioural Sciences

**PSYB21H3 Introduction to Development Psychology: Focus on Education**

Child and adolescent development in education. This course presents students with a broad and integrative overview of child development as it pertains to education. Topics are organized chronologically beginning with prenatal development and continuing through selected issues in adolescence and life-span development. In addition to the lecture component, students will complete a field placement in which they observe children’s behaviour and think critically about development. (Note: course includes 12-20 hours of field placements)

Prerequisite: Enrolment in CTEP
Exclusion: CTE100H, PSYB20H3, PSY210H
Recommended Preparation: PSYA01H3 & PSYA02H3
Breadth Requirement: Social & Behavioural Sciences

---

**Diaspora and Transnational Studies**

**Faculty List**

- M. Lambek, B.A. (McGill), M.A., Ph.D. (Michigan), F.R.S.C., Professor
- N. Kortenaar, M.A., Ph.D. (Toronto), Professor
- M.B. Goldman, M.A. (Victoria), Ph.D. (Toronto), Associate Professor
- E.A. Harney, M.Phil., Ph.D. (London), Associate Professor
- P. Landolt, B.A., M.A. (York), Ph.D. (Johns Hopkins), Associate Professor
- G. Daswani, B.Sc. (National University of Singapore), M.Sc., Ph.D. (London School of Economics), Assistant Professor
- K. MacDonald, B.A., M.A., Ph.D. (Waterloo), Assistant Professor
- A. Paz, B.A. (Queen's), M.A. (Tel Aviv), M.A. (Chicago), Ph.D. (Chicago), Assistant Professor

**Undergraduate Counsellor:** J. Roopnarinesingh  Email: social-sciences-counsellor@utsc.utoronto.ca

Where is home? Need it be in one place? Is it always attached to territory? Diaspora and transnational studies examines the historical and contemporary movements of peoples and the complex problems of identity and experience to which these movements give rise as well as the creative possibilities that flow from movement. The program is comparative and interdisciplinary, drawing from the
social sciences, history and the arts. Students are required to take two linked half-courses that offer an introduction to a broad array of themes and disciplinary methodologies and two fourth year seminars that build on the understanding developed in the course of the program. The program offers a wide selection of additional courses, giving students the opportunity to learn about a range of diasporic communities as well as key debates in the field.

MAJOR PROGRAM IN DIASPORA AND TRANSNATIONAL STUDIES (ARTS)

Program Requirements

Students must complete 7.0 full credits as follows:

1. DTSB01H3 Introduction to Diaspora and Transnational Studies I
   DTSB02H3 Introduction to Diaspora and Transnational Studies II
2. 5.0 full credits from Group A and Group B courses (below) with at least 2.0 full credits from each group. Coverage must include at least two diasporic communities or regions, to be identified in consultation with the program advisor. At least 1.0 full credit must be at the C-level or above.
3. Any two of:
   DTS401H Advanced Topics in Diaspora and Transnational Studies
   DTS402H Advanced Topics in Diaspora and Transnational Studies
   DTS403H Advanced Topics in Diaspora and Transnational Studies
   DTS404H Advanced Topics in Diaspora and Transnational Studies

*Students pursuing a DTS major should contact the Centre for Diaspora and Transnational Studies (CDTS@utoronto.ca) to be enrolled in these courses.

Note: In addition, while not required at this point in time, the Faculty of Arts & Science course JQR360H (The Canadian Census: Populations, Migrations and Demographics) is highly recommended.

Group A (Humanities) courses

CLAC05H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
CLAC24H3 Multiculturalism and Cultural Identities in the Greek and Roman Worlds
ENGB17H3 Contemporary Literature from the Caribbean
ENGB19H3 Contemporary Literature from South Asia
ENGC13H3 Ethnic Traditions in American Literature
ENGC70H3 The Immigrant Experience in Literature to 1980
ENGC71H3 The Immigrant Experience in Literature since 1980
ENGD62H3 Topics in Postcolonial Literature and Film
ENGD68H3 Topics in Literature and Religion
ENGD71H3 Studies in Arab North American Literature
(ENGD87H3) Between Traditions and Freedoms: Writing by Canadians of Asian Descent
FREB28H3 The Francophone World
FREB35H3 Francophone Literature
FREB70H3 Cinema of the Francophone World
FREB84H3 Folktale, Myth and the Fantastic in the French-Speaking World
FREC47H3 Special Topics in Linguistics: Pidgin and Creole Languages
FREC83H3 Cultural Identities and Stereotypes in the French-Speaking World
FRED12H3 Advanced Topics in Literature: Haitian Migrant Literature in Québec
(GASB01H3) Methodologies and Issues in Global Asia Studies
(GASB10H3) Introduction to South Asian Literatures
(GASB11H3) Introduction to Chinese Literature
GASB20H3 Gender and Social Institutions in Asia
GASB30H3 Asian Religions and Cultures
GASB31H3 Chinese Thought and Culture in Historical Perspective
GASC20H3 Gendering Global Asia
(GASC31H3) Self and Imagination in Pre-modern China
GASC32H3 Art of Memory: China and the West
GASC40H3 Chinese Media and Politics
GASC41H3 Media and Popular Culture in East and Southeast Asia
GASC42H3 Film and Popular Culture in South Asia
GASC50H3 Comparative Studies of East Asian Legal Cultures
(GASC51H3) Politics and Culture in Modern South Asia
HISB02H3 The British Empire: A Short History
(HISB18H3 History on Film)
HISB50H3 Africa in the Nineteenth Century
HISB51H3 Twentieth Century Africa
HISB57H3 Sub-Continental Histories: South Asia in the World
Diaspora and Transnational Studies

HISB62H3 The Early Modern Mediterranean, 1500-1800
HISC03H3 History of Animals and People
HISC14H3 Edible History: History of Global Foodways
HISC36H3 People in Motion: Immigrants and Migrants in U.S. History
HISC45H3 Immigrants and Race Relations in Canadian History
HISC57H3 China and the World
HISC58H3 Delhi and London: Imperial Cities, Mobile People
HISC60H3 Old Worlds? Strangers and Foreigners in the Mediterranean, 1200-1700
HISD04H3 Missionaries and Converts in the Early Modern World
HISD05H3 Between Two Worlds? Translators and Interpreters in History
HISD06H3 Global History of Crime and Punishment since 1750
HISD31H3 Thinking of Diversity: Perspectives on American Pluralisms
HISD35H3 The Politics of American Immigration, 1865-present
HISD52H3 East African Societies in Transition
HISD56H3 'Coolies' and Others: Asian Labouring Diasporas in the British Empire
HISD60H3 Travelling and Travel Writing from the Middle Ages to the Early Modern Period
IEEC01H3 Theories and Methods in the Study of Society and Culture
IEEC21H3 Media and Popular Culture in East and Southeast Asia
IEEC22H3 Perspectives on the Globalized and the Transnational II
JOUB01H3 Covering Immigration and Transnational Issues
LGGB74H3 Intermediate Tamil
MDSB05H3 Media and Globalization (formerly HUMB74H3)
(MDSB26H3) Covering Immigration
RLGC10H3 Hinduism in South Asia and the Diaspora
(RLGC12H3) Contemporary Engaged Buddhist Movements in Asia
(VPAB09H3) Dialogues in the Diaspora
VPHB50H3 Africa through the Photographic Lens
VPHB65H3 Exhibiting Africa: Spectacle and the Politics of Representation
VPHB67H3 Religion in the Arts: Buddhist Arts and Cultures
VPHB70H3 Images of Women: East Asian Visual Culture
VPHB75H3 Religion in the Arts: Hinduism and Jainism
(VPHC52H3) Issues in Contemporary Global Arts
VPHC53H3 The Silk Routes
(VPHC58H3) Religion in the Arts: Seminar in Buddhism and Art
VPHC68H3 Art in Global Cities
(VPHC70H3) Modern and Contemporary Arts and Visual Culture of the Middle East
(VPHC71H3) Brazilian Modernism: Art and Architecture
VPHC73H3 Home, Away and In Between: Artists. Art, and Identity
VPMA99H3 Music of the World's Peoples
VPMB75H3 Music in Islamic Cultures
VPMB79H3 Performing Arts of Asia
(VPMB99H3) Popular Music in a Cross-Cultural Context
VPMC95H3 Musical Diasporas in Canada and the USA
(WSTD04H3) Senior Seminar in Gender, Equity and Human Rights/Gender, Local and Global Communities
Plus any course identified by the Faculty of Arts & Science or by the University of Toronto Mississauga as a Group A course.

**Group B (Social Sciences) courses**

ANTB05H3 Culture and Society in Africa
(ANTB08H3) The Chinese Diaspora
ANTB16H3 Canadian Cultural Identities
ANTB20H3 Culture, Politics and Globalization
(ANTB54H3) Peoples of the Middle East: An Introduction
ANTB64H3 The Anthropology of Food: Consuming Passions
ANTB65H3 An Introduction to Pacific Island Societies
(ANTC06H3) African Cultures and Societies II: Case Studies
ANTC09H3 Families: Kinship and Marriage from a Cross-Cultural Perspective
ANTC19H3 Producing People and Things: Economics and Social Life
ANTC34H3 The Anthropology of Transnationalism
(ANTC55H3) Muslim Societies
GGRC45H3 Local Geographies of Globalization
GGRD10H3 Health and Sexuality
GGRD19H3 Spaces of Multiraciality: Critical Mixed Race Theory
MINOR PROGRAM IN DIASPORA AND TRANSNATIONAL STUDIES (ARTS)

Program Requirements
Students must complete 4.0 full credits as follows:
The specific requirements of the minor program at U of T Scarborough are as follows:

1. DTSB01H3 Introduction to Diaspora and Transnational Studies I
   DTSB02H3 Introduction to Diaspora and Transnational Studies II
2. 2.5 full credits from Group A and Group B courses (see the Major Program above) with at least 1.0 full credit from each group.
   At least 0.5 credit must be at the C-level or above.
3. Any two of:
   DTS401H Advanced Topics in Diaspora and Transnational Studies
   DTS402H Advanced Topics in Diaspora and Transnational Studies
   DTS403H Advanced Topics in Diaspora and Transnational Studies
   DTS404H Advanced Topics in Diaspora and Transnational Studies

*Students pursuing a DTS minor should contact the Center for Diaspora and Transnational Studies (CDTS@utoronto.ca) to be enrolled in these courses.

Note: In addition, while not required at this point in time, the Faculty of Arts & Science course JQR360H (The Canadian Census: Populations, Migrations and Demography) should be taken.

DTSB01H3 Introduction to Diaspora and Transnational Studies I
An interdisciplinary introduction to the study of diaspora, with particular attention to questions of history, globalization, cultural production and the creative imagination. Material will be drawn from Toronto as well as from diasporic communities in other times and places.
Exclusion: DTS200Y, DTS201H It is recommended that students take DTSB01H3 in their second year of study
Breadth Requirement: Social & Behavioural Sciences

DTSB02H3 Introduction to Diaspora and Transnational Studies II
A continuation of DTSB01H3. An interdisciplinary introduction to the study of diaspora, with particular attention to questions of history, globalization, cultural production and the creative imagination. Material will be drawn from Toronto as well as from diasporic communities in other times and places.
Prerequisite: It is recommended that DTSB01H3 & DTSB02H3 be taken in the same academic year.
Exclusion: DTS200Y, DTS202H
Breadth Requirement: Social & Behavioural Sciences

Economics for Management Studies

Faculty List
M. Krashinsky, S.B. (M.I.T.), M.Phil., Ph.D. (Yale), Professor
M. Campolieti, B.Sc., M.A., Ph.D. (Toronto), Associate Professor
A.M. Franco, B.A. (California), M.A., Ph.D. (Rochester), Associate Professor
G. Frazer, B. Math. (Waterloo), B.Ed. (Western), M.A. (Toronto), M.Phil., Ph.D. (Yale), Associate Professor
H. Krashinsky, B.A. (Queen's), M.A., Ph.D. (Princeton), Associate Professor
I.C. Parker, B.A. (Manitoba), M.A. (Toronto), Ph.D. (Yale), Associate Professor
J.D. Campbell, B.A. (Oxford), Ph.D. (Brown), Assistant Professor
A. Chandra, B.A. (India), M.A., Ph.D. (Illinois), Assistant Professor
Economics for Management Studies

1. All students, both those who have been directly admitted into the Department from high school (and who are guaranteed admission to Programs in Economics for Management Studies and in Management Studies), must formally apply to specific programs after four credits have been completed. Decisions are made on program requests which students submit to the Registrar (see the Registration Guide which is provided by the Registrar). Students should have ten full credits or less when they seek admission to programs in the Department of Management.

2. Those students directly admitted into the Department from high school are guaranteed entry into a program in the Department (only a limited number of students not directly admitted in Co-op Programs will be accepted into Co-op programs after first year). Directly admitted students must maintain a CGPA of 2.0 or greater after completing eight credits in order to remain in these programs.

3. Admission to the Minor Program in Economics for Management Studies is not limited. All students who apply for this program will be admitted.

Note: Students cannot graduate with credit for both a B.B.A. and a Major Program in Economics for Management Studies.

4. Specialist in Management (B.B.A.) - a Specialist Program in Economics in the context of a Management degree, and including Co-op work terms. This Program leads to a B.B.A. Described in detail below.

5. Specialist in Economics for Management Studies - a Specialist Program in Economics in the context of a Management degree. This program leads to a B.B.A. Described in detail below.

6. Major in Economics for Management Studies - program of six full credits of Economics for Management Studies, one full credit in Mathematics and one in Humanities, English, or Philosophy. This is an arts program. (See the Degrees section of this Calendar for information on B.A. and B.Sc. degrees.) Described in detail below.

7. Specialist in International Development Studies or Major in Public Policy or Major in International Studies or Major in Health Studies within which students may choose to include a significant component from Economics for Management Studies. Described in detail elsewhere in this Calendar.

Other Programs with a substantial component of Economics for Management Studies:

8. Specialist in Management (B.B.A.) - same as #5 above, but also includes Co-op work terms.

9. Specialist or Major in International Development Studies or Major in Public Policy or Major in International Studies or Major in Health Studies within which students may choose to include a significant component from Economics for Management Studies. Described in detail elsewhere in this Calendar.

Admission to Programs in Economics for Management Studies and in Management

1. All students, both those who have been directly admitted into the Department from high school (and who are guaranteed admission into programs in the Department) and those admitted into pre-program (therefore not guaranteed admission into programs in the Department) must formally apply to specific programs after four credits have been completed. Decisions are made on program requests which students submit to the Registrar (see the Registration Guide which is provided by the Registrar). Students should have ten full credits or less when they seek admission to programs in the Department of Management. Note that enrolment in ECMB02H3, ECMB06H3, ECMB11H3, ECMB12H3, ECMC02H3, ECMC06H3, ECMC11H3, ECMD10H3, ECMD13H3 & ECMD14H3 will be strictly limited to students enrolled in Specialist or Major programs in the Department of Management and, where possible, other students who meet criteria of academic merit.

2. Those students directly admitted into the Department from high school are guaranteed entry into a program in the Department (only a limited number of students not directly admitted in Co-op Programs will be accepted into Co-op programs after first year). Directly admitted students must maintain a CGPA of 2.0 or greater after completing eight credits in order to remain in these programs.

3. Admission to the Minor Program in Economics for Management Studies is not limited. All students who apply for this program...
will be admitted. However, students are warned that they are not guaranteed admission to B-level and C-level courses, and thus will be accommodated only after other program students have been admitted to these courses. Thus, many courses may be unavailable.

Economics for Management Studies Courses with Limited Enrolment

Students who have been admitted to Specialist and Major programs in the Department of Management are guaranteed access to enough courses in Economics for Management Studies to complete their programs. To protect that access, students must register early in the registration process. After a period in which program students are given priority, access to Economics for Management Studies courses will be allocated on the basis of academic merit. Students not formally admitted to a Specialist or Major program in the Management Department will likely experience difficulty in gaining access to enough courses to complete an Economics for Management Studies program.

SPECIALIST CO-OPERATIVE PROGRAM IN ECONOMICS FOR MANAGEMENT STUDIES (BACHELOR OF BUSINESS ADMINISTRATION)

Supervisor of Studies: Iris Au  E-mail: economics-supervisor-studies@utsc.utoronto.ca

The Specialist Co-operative program in Economics for Management Studies (B.B.A.) is a work-study program which combines academic studies in economics and management with work experience in public and private enterprises. This degree is designed to allow students to learn practical skills of data analysis and to combine them with the interpretive skills given by knowledge of economic theory. For information on admission, work terms and curriculum requirements, please see the Co-operative Programs section and the Management section of this Calendar.

SPECIALIST PROGRAM IN ECONOMICS FOR MANAGEMENT STUDIES (BACHELOR OF BUSINESS ADMINISTRATION)

Supervisor of Studies: Iris Au  Email: economics-supervisor-studies@utsc.utoronto.ca

This program will provide a specialization for those wishing for a substantial component of Economics in a Management degree leading to a Bachelor of Business Administration (B.B.A.). The students in this program may be seeking to prepare themselves for studies in Economics at the Masters’ level. For more details and curriculum requirements, please refer to the Management section of this Calendar.

The Co-operative Program option of this program is a work-study program which combines academic studies in economics and management with work experience in public and private enterprises. It is designed to allow students to learn practical skills of data analysis and to combine them with the interpretive skills given by knowledge of economic theory. For information on admission, work terms, and curriculum requirements, please see the Co-operative Programs section and the Management section of this Calendar.

Program Admission

Note: Registration in this program is limited. If not directly admitted to the program from high school, students may apply to the program after first year. They must have completed a minimum of four credits at the University of Toronto with the required courses to be considered for this program. Required courses must include ECMA04H3, ECMA06H3, MGTA03H3, MGTA04H3 & [MATA32H3 & MATA33H3] (or equivalents). Students will be considered on the basis of cumulative GPA. For more details please refer to the Management section of this Calendar.

Program Requirements

For specific program requirements, see the Management section of this Calendar.

Students should be aware that the mathematics requirement implies that Grade 12 Calculus is a prerequisite for entry to this Program. Further, students who are considering graduate work in Economics should be aware that they should accumulate considerably more mathematics than the minimum required; they should consult the Supervisor of Studies in Economics for details.

Academic Assessment

Please refer to the Management section of this Calendar for rules on academic assessment for degrees leading to the B.B.A. All students pursuing a B.B.A. are assessed based on those rules.

Overall course load limit for B.B.A. students

Please refer to the Management section of this Calendar for rules on course load limits for B.B.A. students.

MAJOR PROGRAM IN ECONOMICS FOR MANAGEMENT STUDIES (ARTS)

Supervisor of Studies: Iris Au  Email: economics-supervisor-studies@utsc.utoronto.ca

This Program is designed to give a coordinated exposure to the subject matter of Economics for Management Studies to students pursuing the four-year degree with more than a single area of concentration.

Program Admission

Note: Registration in this Program is limited.

Students must have completed a minimum of four full credits to be considered for this program. Required courses include ECMA04H3, ECMA06H3, MATA32H3, MATA33H3 (or equivalents). Decisions will be made on the basis of cumulative GPA. Students may apply until they have completed up to 10 full credits, and admission will be on the basis of all grades received. Students who have completed more than 10 full credits will not be considered for admission to the Program. Students should be aware that the Mathematics requirement implies that Grade 12 Calculus is a requirement for entry into this program.

Note: Students in the B.B.A. may not jointly enrol in the Major Program in Economics for Management Studies.
Program Requirements
The Program consists of six full credits in Economics for Management Studies, one full credit in Mathematics and one full credit in Humanities. The Economics courses must include:
ECMA04H3 & ECMA06H3
ECMB02H3 & ECMB06H3
[ECMB11H3 & ECMB12H3]
ECMC02H3 & ECMC06H3
ECMC11H3
Plus 1.5 full credits chosen from the courses in Economics for Management Studies including at least one at the C-level (not including ECMC91H3, ECMC92H3, ECMC93H3).
Students must also complete [MATA32H3 & MATA33H3] or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3] and one full credit in Humanities.

Note: Students who take ECMA01H3 and ECMA05H3 and then decide to apply for this program will be permitted to substitute [ECMA01H3 & ECMA05H3] for [ECMA04H3 & ECMA06H3]. However, these students will be required to complete [MATA32H3 & MATA33H3] or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3] before registering for ECMB02H3 and ECMB06H3.

STUDENTS WHO ARE CONSIDERING COMBINING PROGRAMS BETWEEN ECONOMICS AND STATISTICS
For students who are intending to pursue a major in Economics with a major or minor in Statistics, we advise the following recommended sequence of required courses. If the sequence outlined below is not followed, it may result in the student taking exclusions and incurring an “EXTRA” credit. An “EXTRA” credit does NOT count towards the 20 credit degree requirement.
STAB52H3
STAB57H3
ECMB12H3
ECMC11H3*
STAC67H3
* ECMC11H3 may be taken concurrently with STAC67H3. However, if ECMC11H3 is taken after STAC67H3, it will count as an “EXTRA” course and no credit will be given for degree requirements.

MINOR PROGRAM IN ECONOMICS FOR MANAGEMENT STUDIES (ARTS)
Supervisor of Studies: Iris Au Email: economics-supervisor-studies@utsc.utoronto.ca
This program is designed to give exposure to the subject matter in some areas of Economics to students who will combine this minor with other programs in order to graduate. (See the Degrees section of this Calendar for information.) Students need not have completed Grade 12 Calculus in order to enter this program.

Program Admission
Note: Registration in this program is not limited and does not require training in Calculus. Students will note that some of the B- and C-level courses in Economics for Management Studies do require Calculus; therefore, students signed up for the Minor Program must choose their courses carefully, ensuring that they have the necessary prerequisites.

Note: Students in the B.B.A. may not jointly enrol in the Minor Program in Economics for Management Studies.

Program Requirements
The program consists of four full credits in Economics for Management Studies as follows:
ECMA01H3 or ECMA04H3
ECMA05H3 or ECMA06H3
ECMB01H3 or ECMB02H3
ECMB05H3 or ECMB06H3
Plus two more full credits in Economics for Management Studies, including at least one at the C-level.

Note: Students are warned that they are not guaranteed admission to all B-level and C-level courses. The following C-level courses (ECMC91H3, ECMC92H3 & ECMC93H3) are available to students in the minor program.
Note: Students may if they wish, count STAB22H3, ANTC35H3, PSYB07H3 or SOCB06H3 or a more advanced statistics course as one half credit B-level Economics course in the Minor Program in Economics for Management Studies. While it is not required, students are strongly encouraged to include a statistics course in the program.
ECMA01H3 Introduction to Microeconomics
Economic theory of the firm and the consumer. Although calculus is not used in this course, algebra and graphs are used extensively to illuminate economic analysis.

Note: This course is not for students interested in applying to the Specialists in Management and Economics leading to the B.B.A or for the Major program in Economics.
Exclusion: ECMA04H3, ECO100Y, ECO105Y
Breadth Requirement: Social & Behavioural Sciences

ECMA04H3 Introduction to Microeconomics: A Mathematical Approach
Economic theory of the firm and the consumer. Calculus, algebra and graphs are used extensively. The course is oriented towards students interested in the Specialist Program in Management, the Specialist program in Economics for Management Studies, and the Major Program in Economics for Management Studies.
Prerequisite: Grade 12 Calculus
Corequisite: It is strongly recommended that MATA32H3 & MATA33H3 (or equivalents) be taken simultaneously with ECMA04H3 & ECMA06H3
Exclusion: ECMA01H3, ECO100Y, ECO105Y
Breadth Requirement: Social & Behavioural Sciences

ECMA05H3 Introduction to Macroeconomics
Topics include output, employment, prices, interest rates and exchange rates. Although calculus is not used in this course, algebra and graphs are used extensively to illuminate economic analysis.

Note: This course is not for students interested in applying to the Specialists in Management and Economics leading to the B.B.A or for the Major program in Economics.
Exclusion: ECMA06H3, ECO100Y, ECO105Y
Breadth Requirement: Social & Behavioural Sciences

ECMA06H3 Introduction to Macroeconomics: A Mathematical Approach
Study of the determinants of output, employment, prices, interest rates and exchange rates. Calculus, algebra and graphs are used extensively. The course is oriented towards students interested in the Specialist Program in Management, the Specialist program in Economics for Management Studies, and the Major Program in Economics for Management Studies.
Prerequisite: Grade 12 Calculus
Corequisite: It is strongly recommended that MATA32H3 & MATA33H3 (or equivalents) be taken simultaneously with ECMA04H3 & ECMA06H3
Exclusion: ECMA05H3, ECO100Y, ECO105Y
Breadth Requirement: Social & Behavioural Sciences

ECMB01H3 Price Theory
Intermediate level development of the principles of microeconomic theory. The emphasis is on static partial equilibrium analysis. Topics covered include: consumer theory, theory of production, theory of the firm, perfect competition.
This course does not qualify as a credit for either the Major in Economics for Management Studies or the B.B.A.
Prerequisite: [ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]
Exclusion: ECMB02H3, ECO200Y, ECO204Y, ECO206Y
Enrolment Limit: 120 per section
Breadth Requirement: Social & Behavioural Sciences

ECMB02H3 Price Theory: A Mathematical Approach
Intermediate level development of the principles of microeconomic theory. The course will cover the same topics as ECMB01H3, but will employ techniques involving calculus so as to make the theory clearer to students.
Enrolment is limited to students registered in programs requiring this course.
Prerequisite: ECMA04H3 & ECMA06H3 & [MATA32H3 & MATA33H3] (or equivalents) or (MATA27H3). Students who have completed ECMA01H3 & ECMA05H3 & [MATA32H3 & MATA33H3] (or equivalents) may be admitted with the permission of the Supervisor of Studies.
Exclusion: ECMB01H3, ECO200Y, ECO204Y, ECO206Y
Enrolment Limit: 80 per section
Breadth Requirement: Social & Behavioural Sciences

ECMB05H3 Macroeconomic Theory and Policy
Intermediate level development of the principles of macroeconomic theory. Topics covered include: theory of output, employment and the price level. This course does not qualify as a credit for either the Major in Economics for Management Studies or for the B.B.A.
Prerequisite: [ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]
Exclusion: ECMB06H3, ECO202Y, ECO208Y, ECO209Y
Enrolment Limit: 120 per section
Breadth Requirement: Social & Behavioural Sciences

ECMB06H3 Macroeconomic Theory and Policy: A Mathematical Approach
Intermediate level development of the principles of macroeconomic theory. The course will cover the same topics as ECMB05H3, but will employ techniques involving calculus so as to make the theory clearer to students.
Enrolment is limited to students registered in programs requiring this course.
Prerequisite: ECMA04H3 & ECMA06H3 & [MATA32H3 & MATA33H3] (or equivalents) or (MATA27H3). Students who have completed ECMA01H3 & ECMA05H3 & [MATA32H3 & MATA33H3] (or equivalents) may be admitted with the permission of the Supervisor of Studies.
Exclusion: ECMB05H3, ECO202Y, ECO208Y, ECO209Y
Enrolment Limit: 80 per section
Breadth Requirement: Social & Behavioural Sciences

ECMB11H3 Quantitative Methods in Economics I
An introduction to probability and statistics as used in economic analysis. Topics to be covered include: descriptive statistics, probability, special probability distributions, sampling theory, confidence intervals. Enrolment is limited to students registered in programs requiring this course.
Prerequisite: ECMA04H3 & ECMA06H3 & [MATA32H3 & MATA33H3] (or equivalents)
Students who have completed ECMA01H3 & ECMA05H3 & [MATA32H3 & MATA33H3] (or equivalents) may be admitted with the permission of the Supervisor of Studies.
Enrolment Limit: 120 per section
Breadth Requirement: Quantitative Reasoning
ECMB12H3 Quantitative Methods in Economics II

A second course in probability and statistics as used in economic analysis. Topics to be covered include: confidence intervals, hypothesis testing, simple and multiple regression. Enrolment is limited to students registered in programs requiring this course.
Prerequisite: [ECMB11H3 or [STAB52H3 & STAB57H3]] & [MATA32H3 & MATA33H3] (or equivalents)
Note: STAB27H3 is not equivalent to ECMB12H3
Enrolment Limit: 80 per section
Breadth Requirement: Quantitative Reasoning

ECMB35H3 Public Decision Making

A study of decision-making by governments from an economic perspective. The course begins by examining various rationales for public involvement in the economy and then examines a number of theories explaining the way decisions are actually made in the public sector. The course concludes with a number of case studies of Canadian policy making.
Prerequisite: [ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMB36H3 Economic Aspects of Public Policy

Cost-Benefit Analysis (CBA) is a key policy-evaluation tool developed by economists to assess government policy alternatives and provide advice to governments. In this course, we learn the key assumption behind and techniques used by CBA and how to apply these methods in practice.
Prerequisite: [ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]
Corequisite: ECMB01H3 or ECMB02H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMB68H3 Comparative Economic Systems

A research-oriented course focused on the application of general systems theory to comparative analysis of alternative economic systems, capitalist, socialist and other. Half of the course will focus on general theoretical systems models; the other half will empirically study Russia, China and other systems.
Prerequisite: [ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]
Corequisite: ECMB01H3 or ECMB02H3
Breadth Requirement: Social & Behavioural Sciences

ECMC06H3 Topics in Macroeconomic Theory

Continuing development of the principles of macroeconomic theory. The course will build on the theory developed in ECMB06H3. Topics will be chosen from a list including consumption theory, investment, exchange rates, rational expectations, inflation, neo-Keynesian economics, monetary and fiscal policy. Enrolment is limited to students registered in programs requiring this course.
Prerequisite: ECMB06H3 & [MATA32H3 & MATA33H3] (or equivalents)
Exclusion: ECO202Y, ECO208Y, ECO209Y
Enrolment Limit: 80 per section
Breadth Requirement: Social & Behavioural Sciences

ECMC20H3 Economics of the Media

An examination of the role and importance of communications media in the economy. Topics to be covered include: the challenges media pose for conventional economic theory, historical and contemporary issues in media development, and basic media-research techniques. The course is research-oriented, involving empirical assignments and a research essay.
Prerequisite: ECMB01H3 or ECMB02H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC27H3 Classics in the History of Economic Thought

A study of the literature of economics, both past and current. Students will read economists important in the development of current economic thought, including Smith, Marx, and Keynes, and will also read the ideas of some important current economic thinkers. Emphasis is on primary sources rather than secondary commentaries.
Prerequisite: [ECMB01H3 or ECMB02H3] & [ECMB05H3 or ECMB06H3]
Exclusion: ECO322Y, ECO429Y
Enrolment Limit: 60 per section
Breadth Requirement: Social & Behavioural Sciences

ECMC31H3 Economics of the Public Sector: Taxation

A course concerned with the revenue side of government finance. In particular, the course deals with existing tax structures, in Canada and elsewhere, and with criteria for tax design.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: ECMC91H3, ECO336Y
ECMC32H3 Economics of the Public Sector: Expenditures
A study of resource allocation in relation to the public sector, with emphasis on decision criteria for public expenditures. The distinction between public and private goods is central to the course.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: EECM20H3, ECO336Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC34H3 Economics of Health Care
A study of the economic principles underlying health care and health insurance. This course is a survey of some of the major topics in health economics. Some of the topics that will be covered will include the economic determinants of health, the market for medical care, the market for health insurance, and health and safety regulation.
Prerequisite: ECMB02H3 & [MATA32H3 & MATA33H3] (or equivalents)
Exclusion: ECO369H, ECO369Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC37H3 Law and Economics
A study of laws and legal institutions from an economic perspective. It includes the development of a positive theory of the law and suggests that laws frequently evolve so as to maximize economic efficiency. The efficiency of various legal principles is also examined. Topics covered are drawn from: externalities, property rights, contracts, torts, product liability and consumer protection and procedure.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: ECO320H, ECO320Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC38H3 The Economics of Canadian Public Policy
This course provides a comprehensive study of selected Canadian public policies from an economic point of view. Topics may include environmental policy, competition policy, inflation and monetary policy, trade policy and others. We will study Canadian institutions, decision-making mechanisms, implementation procedures, policy rationales, and related issues.
Prerequisite: [ECMB01H3 or ECMB02H3] & [ECMB05H3 or ECMB06H3]
Exclusion: ECO336Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC40H3 Economics of Organization and Management
This course examines the economics of the internal organization of the firm. Emphasis will be on economic relationships between various parties involved in running a business: managers, shareholders, workers, banks, and government.
Topics include the role of organizations in market economies, contractual theory, risk sharing, property rights, corporate financial structure and vertical integration.
Prerequisite: ECMB01H3 or ECMB02H3

ECMC41H3 Industrial Organization
This course covers the economics of the firm in a market environment. The aim is to study business behaviour and market performance as influenced by concentration, entry barriers, product differentiation, diversification, research and development and international trade. There will be some use of calculus in this course.
Prerequisite: ECMB02H3
Exclusion: EECM20H3, ECO310Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC43H3 Organization Strategies
Explores the issue of outsourcing, and broadly defines which activities should a firm do "in-house" and which should it take outside? Using a combination of cases and economic analysis, it develops a framework for determining the "best" firm organization.
Prerequisite: ECMB02H3 & [ECMC40H3 or EECM41H3]
Exclusion: RSM481H, (MGT481H)
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC48H3 Money and Banking
There will be a focus on basic economic theory underlying financial intermediation and its importance to growth in the overall economy. The interaction between domestic and global financial markets, the private sector, and government will be considered.
Prerequisite: ECMB05H3 or ECMB06H3
Enrolment Limit: 60 per section
Breadth Requirement: Social & Behavioural Sciences

ECMC49H3 Financial Economics
This course introduces students to the theoretical underpinnings of financial economics. Topics covered include: intertemporal choice, expected utility, the CAPM, Arbitrage Pricing, State Prices (Arrow-Debreu security), market efficiency, the term structure of interest rates, and option pricing models. Key empirical tests are also reviewed.
Prerequisite: [ECMB02H3] & [ECMB06H3] & EECM12H3
Exclusion: ECO358H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC51H3 Labour Economics I
Applications of the tools of microeconomics to various labour market issues. The topics covered will include: labour supply; labour demand; equilibrium in competitive and non-competitive markets; non-market approaches to the labour market; unemployment. Policy applications will include: income maintenance programs; minimum wages; and unemployment.
Prerequisite: ECMB02H3
Exclusion: ECO239Y, ECO339Y, ECO361Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences
ECMC52H3 Labour Economics II
A continuation of ECMC51H3. Topics covered will include: unions; wage structures; sex and race discrimination; human capital theory; investment in education. Policy issues discussed will include: pay equity; affirmative action; training initiatives; and migration.
Prerequisite: ECMC51H3 & ECMB02H3 & ECMB12H3
Exclusion: ECMC58H3, ECO239Y, ECO339Y, ECO361Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC54H3 Economics of the Family
This course studies the economic aspects of how families make decisions - about employment, child care, and having children. In particular, we study how women's decisions are affected by children and the need to care for them. We study how public policies affect the decisions of family members, and discuss how family policy can be improved.
Prerequisite: ECMB02H3
Exclusion: ECO332H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC58H3 Economics of Human Resource Management
This course focuses on the various methods that firms and managers use to pay, recruit and dismiss employees. Topics covered may include: training decisions, deferred compensation, variable pay, promotion theory, incentives for teams and outsourcing.
Prerequisite: ECMB02H3
Exclusion: ECMC52H3, ECO339Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC61H3 International Economics: Finance
Macroeconomic theories of the balance of payments and the exchange rate in a small open economy. Recent theories of exchange-rate determination in a world of floating exchange rates. The international monetary system: fixed "versus" flexible exchange rates, international capital movements, and their implications for monetary policy.
Prerequisite: ECMB05H3 or ECMB06H3
Exclusion: ECO230Y, ECO328Y, ECO365H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC62H3 International Economics: Trade Theory
An outline of the theories of international trade that explain why countries trade with each other, and the welfare implications of this trade, as well as empirical tests of these theories. The determination and effects of trade policy instruments (tariffs, quotas, non-tariff barriers) and current policy issues are also discussed.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: ECMC93H3, ECO230Y, ECO328Y, ECO364H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC63H3 Financial Crises: Causes, Consequences and Policy Implications
This course studies the causes, consequences and policy implications of recent financial crises. It studies key theoretical concepts of international finance such as exchange-rate regimes, currency boards, common currency, banking and currency crises. The course will describe and analyze several major episodes of financial crises, such as Latin America in the 1980s, East Asia, Europe, Mexico and Russia in the 1990s, and Turkey and Argentina in recent years.
Prerequisite: ECMC61H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC66H3 Economic Development
An introduction to the processes of growth and development in less developed countries and regions. Topics include economic growth, income distribution and inequality, poverty, health, education, population growth, rural and urban issues, and risk in a low-income environment.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: ECO324Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC67H3 Development Policy
A consideration of how government policy can affect the pace and nature of development in Third World countries. Emphasis will be on the most important policies including those relating to rural organization, agricultural goods markets, labour markets, credit markets, land rights systems, income distribution and technological change.
Prerequisite: ECMC66H3 Exclusion: ECO324Y
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

ECMC80H3 Topics in North American Economic Development
A study of the history of economic development in North America. Students will survey current theoretical approaches in economic history, study particular topics in North American economic history, and develop hands-on practice in data collection and analysis.
Prerequisite: ECMB01H3 or ECMB02H3 or ECMB05H3 or ECMB06H3
Exclusion: ECO321Y
Enrolment Limit: 60 per section
Breadth Requirement: History, Philosophy & Cultural Studies

ECMC91H3 Economics and Government
This course provides an overview of what governments can do to benefit society, as suggested by economic theory and empirical research. It surveys what governments actually do, especially Canadian governments. Efficient methods of taxation and methods of controlling government are also briefly covered. **Note:** This course may be applied to the C-level course requirements of the Minor Program in Economics for Management Studies. It may not, however, be used to meet the requirements of any program that leads to a B.B.A. or of the Major Program in Economics for Management Studies.
Prerequisite: ECMB01H3 or ECMB02H3
Exclusion: ECMC31H3, ECMC32H3, ECO336Y
Breadth Requirement: Social & Behavioural Sciences

ECMC92H3 Economics of Markets and Pricing
The course builds on ECMB01H3 (or ECMB02H3) by exposing students to the economics of market structure and pricing. How and why certain market structures, such as
monopoly, oligopoly, perfect competition, etc., arise. Attention will also be given to how market structure, firm size and performance and pricing relate. Role of government will be discussed.

**Note:** This course may be applied to the C-level course requirements of the Minor Program in Economics for Management Studies. It may not, however, be used to meet the requirements of any program that leads to a B.B.A. or of the Major Program in Economics for Management Studies. Prerequisite: ECMB01H3 or ECMB02H3

Exclusion: ECMC12H3 & ECMC11H3

**Prerequisite:** ECMB01H3 & ECMB02H3

**Exclusion:** ECO200Y, ECO204Y, ECO206Y, ECO310Y

**Breadth Requirement:** Social & Behavioural Sciences

**ECMC93H3 International Economics**

This course provides general understanding on issues related to open economy and studies theories in international trade and international finance. Topics include why countries trade, implications of various trade policies, theories of exchange rate determination, policy implications of different exchange rate regimes and other related topics.

**Note:** This course may be applied to the C-level course requirements of the Minor Program in Economics for Management Studies. It may not, however, be used to meet the requirements of any program that leads to a B.B.A. or of the Major Program in Economics for Management Studies. Prerequisite: [ECMB01H3 or ECMB02H3] & [ECMB05H3 or ECMB06H3]

Exclusion: ECMC62H3, ECO230Y, ECO328Y

**Breadth Requirement:** Social & Behavioural Sciences

**ECMD10H3 Theory and Practice of Regression Analysis**

This is an advanced course building on ECMC11H3. Students will master regression theory, hypothesis and diagnostic tests, and assessment of econometric results. Treatment of special statistical problems will be discussed. Intensive computer-based assignments will provide experience in estimating and interpreting regressions, preparing students for ECMD50H3. Enrolment is limited to students registered in programs requiring this course.

**Prerequisite:** ECMB02H3 & ECO230Y, ECO328Y

**Enrolment Limit:** 35

**Breadth Requirement:** Social & Behavioural Sciences

**ECMD12H3 Supervised Reading**

These courses will normally be made available only to upper-level students whose interests are not covered by other courses and whose performance in Economics courses has been well above average. Not all faculty will be available for these courses in any single session.

**Note:** Students must obtain consent from the Supervisor of Studies, supervising instructor, and the Department of Management before registering for this course.

**ECMD13H3 Advanced Microeconomic Theory**

An upper level extension of the ideas studied in ECMC02H3. The course offers a more sophisticated treatment of such topics as equilibrium, welfare economics, risk and uncertainty, strategic and repeated interactions, agency problems, and screening and signalling problems. Enrolment is limited to students registered in programs requiring this course.

**Prerequisite:** ECMB12H3 & ECMC02H3

**Exclusion:** ECO326H, (ECMC13H3)

**Enrolment Limit:** 35

**Breadth Requirement:** Social & Behavioural Sciences

**ECMD14H3 Advanced Macroeconomic Theory**

This course will review recent developments in macroeconomics, including new classical and new Keynesian theories of inflation, unemployment and business cycles. Enrolment is limited to students registered in programs requiring this course.

**Prerequisite:** ECMB12H3 & ECMC06H3

**Exclusion:** ECO325H, (ECMC14H3)

**Enrolment Limit:** 35

**Breadth Requirement:** Social & Behavioural Sciences

**ECMD50H3 Workshop in Economic Research**

This course introduces students the techniques used by economists to define research problems and to do research. Students will choose a research problem, write a paper on their topic and present their ongoing work to the class.

**Prerequisite:** [ECMB02H3 & ECMC02H3], [ECMB06H3 & ECMC06H3], [ECMB11H3 & ECMC12H3] & ECMC11H3. This course should be taken among the last 5 credits of a twenty-credit degree.

**Corequisite:** ECMD10H3

**ECMD70H3 Financial Econometrics**

Financial econometrics applies statistical techniques to analyze the financial data in order to solve problems in Finance. In doing so, this course will focus on four major topics: Forecasting returns, Modeling Univariate and Multivariate Volatility, High Frequency and market microstructure, Simulation Methods and the application to risk management.

**Prerequisite:** ECMC11H3 and [ECMC49H3 or MGTC09H3]

**Exclusion:** ECO462

**Enrolment Limit:** 30

**Breadth Requirement:** Quantitative Reasoning

**These courses may be counted as B-level credits in ECM programs. (See the Geography section of this Calendar for full descriptions):**

GGRC04H3 Urban Residential Geography

(GGRC18H3) Urban Transportation Policy Analysis

GGRC27H3 Location and Spatial Development

**These courses may count for B-level credit in ECM programs. (See the International Development Studies section of this Calendar for full descriptions):**

IDSB01H3 Political Economy of International Development

IDSC12H3 Economics of Small Enterprise and Microcredit
English

Faculty List
R.M. Brown, M.A., Ph.D. (Binghamton), Professor Emeritus
M.C. Cuddy-Keane, M.A., Ph.D. (Toronto), Professor Emerita
N. Kortenaar, M.A., Ph.D. (Toronto), Professor
G. Leonard, M.A., Ph.D. (Florida), Professor
C. Bolus-Reichert, M.A., Ph.D. (Indiana), Associate Professor
N. Dolan, M.A., Ph.D. (Harvard), Associate Professor
A. DuBois, B.A. (Duke), Ph.D. (Harvard), Associate Professor
M.B. Goldman, M.A. (Victoria), Ph.D. (Toronto), Associate Professor
S. Lamb, M.A., Ph.D. (Toronto), Associate Professor
K.R. Larson, M.Phil., M.St. (Oxford), Ph.D. (Toronto), Assistant Professor
A. Maurice, M.A., Ph.D. (Cornell), Assistant Professor
M. Rubright, A.B. (Vassar), M.A. (Missouri-Columbia), Ph.D. (Michigan), Assistant Professor
K. Vernon, B.A., M.A. (Simon Fraser), Ph.D. (Victoria), Assistant Professor
M. Assif, B.A. (Hassan II), M.A., Ph.D. (Case Western Reserve), Senior Lecturer
S.D. King, M.A., Ph.D. (Western), Senior Lecturer
D. Flynn, M.A., Ph.D. (Berkeley), Lecturer
S. Nikkila, M.A. (Harvard), Ph.D. (Edinburgh), Lecturer
D. Tysdal, B.A. (Regina), M.A. (Acadia), M.A. (Toronto), Lecturer
L. Wey, M.A., Ph.D. (Harvard), Lecturer

Program Chair: C. Bolus-Reichert (416-287-7162)

The discipline of English involves not only the study of the great works of literature but also training in responding to the complex modes of interpretation and communication that are invaluable in our increasingly media-saturated world. At UTSC, the curriculum offers courses in the English-language literatures of Britain, Canada, America, and other areas of the world. All courses place emphasis on close responsive reading, critical thinking, and clarity of expression.

A-level courses introduce students to the study of English at the university level. ENGA10H3 and ENGA11H3 are designed both for students wanting an introductory course in the Specialist, Major, or Minor Program in English and for students having a general interest in literature or the twentieth century.

ENGB03H3, ENGB04H3, and ENGB05H3 are required for all English Programs. B-level courses have no prerequisites and are available both to beginning and to more advanced students. C-level courses, as their prerequisites indicate, are designed to build upon previous work and presuppose some background in critical skills and some familiarity with the subject matter. D-level courses provide opportunities for more sophisticated study and require some independent work on the part of the student. These courses are generally restricted in enrolment and may involve the presentation of seminars.

Students are advised to check the prerequisites for C- and D-level courses when planning their individual programs, and to consult with the Program Supervisor or the Program Director before taking courses on other campuses.

Students planning to pursue graduate studies in English are advised to consult the Program Supervisor about appropriate programs of study.

Guidelines for 1st year course selection
First-year students often take ENGA10H3 or ENGA11H3 (or both) as an introduction to university-level English studies. Students intending to complete the Specialist or Major Program in English should plan to take at least two of ENGB03H3, ENGB04H3 & ENGB05H3 early in their university career. They may, if they so choose, begin satisfying these B-level English requirements in their first year. Students are strongly encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their studies.

Note: For Co-op opportunities related to the Specialist and Major Programs in English, please see the Humanities and Social Sciences Co-operative section of this Calendar.

SPECIALIST PROGRAM IN ENGLISH (ARTS)
Program Supervisor: K. Larson (416-287-7169) Email: english-program-supervisor@utsc.utoronto.ca
Program Requirements
12.0 credits in English are required of which at least 3.0 must be at the C-level and 1.5 at the D-level. They should be selected as follows:
1. ENGB03H3 Critical Thinking About Narrative
2. ENGB04H3 Critical Thinking About Poetry
3. ENGB05H3 Critical Writing about Literature
4. 3.0 credits from courses whose content is pre-1900
5. 0.5 credits in Canadian literature
6. 7.0 additional credits in English

Note: Students may count no more than one of the following courses towards the Specialist requirements:
ENGB35H3 Children's Literature
(ENGB36H3) Detective Fiction
108

(ENGB41H3) Science Fiction
Students may count no more than one full credit of D-level independent study [ENGD26Y3, ENGD27H3, ENGD28H3, (ENGD97H3), ENGD98Y3, (ENGD99H3)] towards an English program.
The following courses do not count towards any English programs: ENG100H, ENG185Y.

MAJOR PROGRAM IN ENGLISH (ARTS)
Program Supervisor: K. Larson (416-287-7169) Email: english-program-supervisor@utsc.utoronto.ca
Program Requirements
7.5 credits in English are required of which at least 2.0 must be at the C- or D-level. They should be selected as follows:
1. ENGB03H3 Critical Thinking About Narrative
2. ENGB04H3 Critical Thinking About Poetry
3. ENGB05H3 Critical Writing about Literature
4. 2.0 credits from courses whose content is pre-1900
5. 4.0 additional credits in English.

Note: Students may count no more than one of the following courses towards the Major requirements:
ENGB35H3 Children's Literature
ENGB36H3 Detective Fiction
ENGB41H3 Science Fiction

Students may count no more than one full credit of D-level independent study [ENGD26Y3, ENGD27H3, ENGD28H3, (ENGD97H3), ENGD98Y3, (ENGD99H3)] towards an English program.

MINOR PROGRAM IN ENGLISH LITERATURE (ARTS)
Program Supervisor: K. Larson (416-287-7169) Email: english-program-supervisor@utsc.utoronto.ca
Program Requirements
Four credits in English are required. They should be selected as follows:
1. ENGB03H3 Critical Thinking About Narrative
2. ENGB04H3 Critical Thinking About Poetry
3. ENGB05H3 Critical Writing about Literature
4. 1.0 credits at the C-level
5. 1.5 additional credits in English.

MINOR PROGRAM IN LITERATURE AND FILM STUDIES (ARTS)
Program Supervisor: K. Larson (416-287-7169) Email: english-program-supervisor@utsc.utoronto.ca
Program Requirements: 4.0 full credits in English as required
1. 1.5 credits as follows:
ENGB70H3 Introduction to Cinema
ENGB75H3 Cinema and Modernity I
ENGB76H3 Cinema and Modernity II
2. 0.5 credits as follows:
ENGA10H3 Introduction to Twentieth-Century Literature and Film: 1890 to World War II
or
ENGA11H3 Introduction to Twentieth-Century Literature and Film: 1945 to Today
3. 1.0 credits at the C- or D-level, from the following:
ENGC66H3 Literature and Media: From Page to Screen
ENGC76H3 The Body in Modernity: Theories and Representations
ENGC77H3 The Body in Contemporary Culture: Theories and Representations
ENGC78H3 Dystopian Visions in Fiction and Film
ENGC82H3 Cinema Studies: Themes and Theories
ENGC83H3 Studies in World Cinema
ENGD52H3 Cinema: The Auteur Theory
ENGD62H3 Topics in Postcolonial Literature and Film
ENGD91H3 Avant-Garde Cinema
ENGD93H3 Theoretical Approaches to Cinema
ENGD94H3 Stranger than Fiction: The Documentary Film
4. 1.0 additional credits in English

Note: film courses selected from other departments and disciplines will be approved for the Minor in Literature and Film studies on a case-by-case basis.
ENGA10H3 Introduction to Twentieth-Century Literature and Film: 1890 to World War II
An exploration of how literature reflects the artistic and cultural concerns that shaped the first part of the twentieth century. An introduction to university-level critical reading and interpretation, this course will analyse the writing of early twentieth-century men and women.
Exclusion: ENG140Y
Breadth Requirement: Arts, Literature & Language

ENGA11H3 Introduction to Twentieth-Century Literature and Film: 1945 to Today
An exploration of how literature reflects the artistic and cultural concerns that shaped the world after the Second World War. An introduction to university-level critical reading and interpretation, this course will analyse the writing of late twentieth-century men and women from a range of backgrounds and nationalities.
Exclusion: ENG140Y
Breadth Requirement: Arts, Literature & Language

ENGA18H3 Poetry and Popular Culture
Poetry is often seen as distant from daily life. We will instead see how poetry is crucial in popular culture, which in turn impacts poetry. We will read such popular poets as Ginsberg and Plath, look at poetry in film, and consider song lyrics as a form of popular poetry.
Enrolment Limit: 22
Breadth Requirement: Arts, Literature & Language

ENGB03H3 Critical Thinking About Narrative
An introduction to the literary analysis of narrative. This course will study closely a small number of narratives and narrative genres from different periods in order to develop the critical skills to analyse narratives.
Exclusion: ENG110Y
Breadth Requirement: Arts, Literature & Language

ENGB04H3 Critical Thinking About Poetry
An introduction to the literary analysis of poetry. This course will study closely poems and poetic forms from different periods in order to develop the critical skills to analyse poetry.
Exclusion: ENG201Y
Breadth Requirement: Arts, Literature & Language

ENGB05H3 Critical Writing about Literature
Intensive training in critical writing about literature. Students learn essay-writing skills (explication; organization and argumentation; research techniques; bibliographies and MLA-style citation) necessary for the study of English at the university level through group workshops, multiple short papers, and a major research-based paper. This is not a grammar course; students are expected to enter with solid English literacy skills.
Exclusion: (ENGB01H3), (ENGB02H3)
Enrolment Limits: 25 per section
Breadth Requirement: Arts, Literature & Language

ENGB06H3 Canadian Literature I: Imagining the Nation
An examination of large issues and themes that have shaped Canadian literature. Focusing on the development and emergence of a Canadian literary tradition, this course examines the problems of writing in a New World nation, the emergence and definition of an indigenous tradition, and the challenges such a tradition faces.
Exclusion: ENG252Y
Breadth Requirement: Arts, Literature & Language

ENGB07H3 Canadian Literature II: Re-imagining the Nation
An examination of the formation of identity, of a sense of belonging, and of the problematics of nationhood in Canadian writing.
Exclusion: ENG252Y
Breadth Requirement: Arts, Literature & Language

ENGB08H3 American Literature to 1860
An examination of Early American literature in historical context from colonization to the Civil War. This introductory survey places a wide variety of genres including conquest and captivity narratives, theological tracts, sermons, and diaries, as well as classic novels and poems in relation to the multiple subcultures of the period.
Pre-1900 course
Exclusion: ENG250Y
Breadth Requirement: Arts, Literature & Language

ENGB09H3 American Literature from the Civil War to the Present
An introductory survey of major novels, short fiction, poetry, and drama. An introductory survey of major novels, short fiction, poetry, and drama from The Adventures of Huckleberry Finn to Rita Dove’s Thomas and Beulah, with an emphasis on themes of immigration, ethnicity, modernization, individualism, class, and community.
Prerequisite: ENGB08H3
Exclusion: ENG250Y
Breadth Requirement: Arts, Literature & Language

ENGB12H3 Life Writing
Life-writing, whether formal biography, chatty memoir, postmodern biotext, or published personal journal, is popular with writers and readers alike. This course introduces students to life-writing as a literary genre and explores major issues such as life-writing and fiction, life-writing and history, the contract between writer and reader, and gender and life-writing.
Exclusion: ENG232H
Breadth Requirement: Arts, Literature & Language

ENGB14H3 Twentieth-Century Drama
A study of major plays and playwrights of the twentieth century. This international survey might include turn-of-the-century works by Wilde or Shaw; mid-century drama by Beckett, O’Neill, Albee, or Miller; and later twentieth-century plays by Harold Pinter, Tom Stoppard, Caryl Churchill, Peter Shaffer, August Wilson, Tomson Highway, David Hwang, or Athol Fugard.
Exclusion: ENG340H, ENG341H, (ENG342H), (ENGB11H3), (ENGB13H3), (ENG338Y), (ENG339H)
Breadth Requirement: Arts, Literature & Language

ENGB17H3 Contemporary Literature from the Caribbean
A study of fiction, drama, and poetry from the West Indies. The course will examine the relation of standard English to the spoken language; the problem of narrating a history of slavery and colonialism; the issues of race,
A study of literature in English from South Asia, with emphasis on fiction from India. The course will examine the relation of English-language writing to indigenous South Asian traditions, the problem of narrating a history of colonialism and Partition, and the task of making the novel South Asian.
Exclusion: ENG264H, ENG270Y, NEW223Y, (ENG253Y)
Breadth Requirement: Arts, Literature & Language

**ENGB19H3 Contemporary Literature from South Asia**

A study of literature in English from South Asia, with emphasis on fiction from India. The course will examine the relation of English-language writing to indigenous South Asian traditions, the problem of narrating a history of colonialism and Partition, and the task of making the novel South Asian.
Exclusion: ENG264H, ENG270Y, NEW223Y, (ENG253Y)
Breadth Requirement: Arts, Literature & Language

**ENGB25H3 The Canadian Short Story**

A study of the Canadian short story. The Canadian short story has been vital to the Canadian literary tradition and has produced writers of international stature, including Munro, Atwood, Laurence, and Gallant.
Exclusion: ENG215H
Breadth Requirement: Arts, Literature & Language

**ENGB30H3 Classical Myth and Literature**

An analysis of the relationship between classical myth and literature. This course examines classical Greek and Roman myth in relation to English literary works.
Pre-1900 Course
Exclusion: (ENGC58H3), (ENGC60H3), (ENGC61H3)
Breadth Requirement: Arts, Literature & Language

**ENGB31H3 The Romance: In Quest of the Marvelous**

A study of the romance as genre. The romance as episodic tale of marvellous adventures and questing heroes has been both criticized and celebrated. This course looks at the range of a form stretching from Malory and Spenser through Scott and Tennyson to contemporary forms such as fantasy, science fiction, postmodern romance, and the romance novel.
Pre-1900 course
Exclusion: (ENGC31H3)
Breadth Requirement: Arts, Literature & Language

**ENGB32H3 Shakespeare in Context I**

An introduction to the poetry and plays of William Shakespeare, this course situates his works in the literary, social and political contexts of early modern England. The main emphasis will be on close readings of Shakespeare's sonnets and plays, to be supplemented by classical, medieval, and renaissance prose and poetry upon which Shakespeare drew.
Pre-1900 course.
Exclusion: ENG220Y, (ENGB10H3)
Breadth Requirement: Arts, Literature & Language

**ENGB33H3 Shakespeare in Context II**

A continuation of ENGB32H3, this course introduces students to selected dramatic comedies, tragedies and romances and situates Shakespeare's works in the literary, social and political contexts of early modern England. Our readings will be supplemented by studies of Shakespeare's sources and influences, short theoretical writings, and film excerpts.
Pre-1900 course.
Exclusion: (ENGB10H3), ENG220Y

**ENGB34H3 The Short Story**

An introduction to the short story as a literary form. This course examines the origins and recent development of the short story, its special appeal for writers and readers, and the particular effects it is able to produce.
Exclusion: ENG213H
Breadth Requirement: Arts, Literature & Language

**ENGB35H3 Children's Literature**

An introduction to children's literature. This course will locate children's literature within the history of social attitudes to children and in terms of such topics as authorial creativity, race, class, gender, and nationhood.
Exclusion: ENG234H
Breadth Requirement: Arts, Literature & Language

**ENGB37H3 Selling Pleasure: Popular Literature and Mass Culture**

This course considers the creation, marketing, and consumption of popular film and fiction. Genres studied might include bestsellers; detective fiction; mysteries; romance, and horror; fantasy and science fiction; "chick lit"; popular song; pulp fiction and fanzines.
Breadth Requirement: Arts, Literature & Language

**ENGB38H3 The Graphic Novel**

A study of extended narratives in the comic book form. Emphasis on formal analysis of narrative artwork combined with an interrogation of social, political, and cultural issues in this popular literary form. Works to be studied may include graphic novels, comic book series, and comic book short story or poetry collections.
Exclusion: ENG235H, (ENGC57H3)
Breadth Requirement: Arts, Literature & Language

**ENGB45H3 Victorian Poetry and Prose**

An introduction to the poetry and non-fiction prose of the Victorian period, 1837-1901. Representative authors will be studied in the context of a culture in transition, in which questions about democracy, the rights of women, national identity, imperialism, science and religion, and the place of the arts in everyday life were prominent.
Pre-1900 course.
Exclusion: ENG347Y, (ENGC20H3), (ENG312Y)
Breadth Requirement: Arts, Literature & Language

**ENGB50H3 Women and Literature: Forging a Tradition**

An examination of the development of a women's tradition of writing. This course considers the legacy and impact of writers such as Mary Wollstonecraft, Mary Shelley, Jane Austen, Charlotte Bronte and Virginia Woolf.
Pre-1900 course.
Exclusion: (ENG233Y)
Breadth Requirement: Arts, Literature & Language

**ENGB51H3 Gender and Genre**

An analysis of the role of gender in fiction, poetry, and drama. This course will examine such things as the genres women have gravitated toward and excelled at in the light of Woolf's claim that the novel was the genre most accessible to women because it was not entirely formed.
Breadth Requirement: Arts, Literature & Language
ENGB60H3 Creative Writing: Poetry I

An introduction to the writing of poetry. This course will provide an introduction to the writing of poetry through workshop sessions. Admission by portfolio. Portfolios for students seeking admission should be left with the English departmental assistant in H331 no later than the first Tuesday of August. They should contain a selected sample (5-15 pp.) of your strongest writing, which could include fiction, poems or essays. Do not include originals.
Exclusion: (ENG369Y)
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

ENGB61H3 Creative Writing: Fiction I

An introduction to the writing of fiction. This course will provide an introduction to the writing of short fiction through workshop sessions. Admission by portfolio. Portfolios for students seeking admission should be left with the English departmental assistant in H331 no later than the first Monday of October. They should contain a selected sample (5-15 pp.) of your strongest writing, which could include fiction, poems or essays. Do not include originals.
Exclusion: (ENG369Y)
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

ENGB70H3 Introduction to Cinema

An introduction to the critical study of cinema, including films from a broad range of genres, countries, and eras, as well as readings representing the major critical approaches to cinema that have developed over the past century.
Exclusion: INN115Y
Breadth Requirement: Arts, Literature & Language

ENGB75H3 Cinema & Modernity I

An investigation of film genres such as melodrama, film noir, and the western from 1895 to the present. We will look at the creation of an ideological space and of new mythologies that helped organize the experience of modern life. Works of twentieth-century prose and poetry will also be studied.
Breadth Requirement: Arts, Literature & Language

ENGB76H3 Cinema & Modernity II

An investigation of film genres such as romance, gothic, and science fiction from 1895 to the present. We will look at the way cinema developed and created new mythologies that helped people organize the experience of modern life. Works of twentieth-century prose and poetry will also be studied.
Breadth Requirement: Arts, Literature & Language

ENGC02H3 Major Canadian Authors

An examination of three or more Canadian writers. This course will draw together selected major writers of Canadian fiction or of other forms.
Prerequisite: [ENGBO3H3 & ENGBO4H3 & one of ENGB05H3 or (ENGBO1H3) or (ENGBO2H3)] or [ENGBO6H3 or ENGBO7H3]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC03H3 Topics in Canadian Fiction

An analysis of Canadian fiction with regard to the problems of representation. Topics considered may include how Canadian fiction writers have responded to and documented the local; social rupture and historical trauma; and the problematics of representation for marginalized societies, groups, and identities.
Prerequisite: [ENGBO3H3 & ENGBO4H3 & one of ENGB05H3 or (ENGBO1H3) or (ENGBO2H3)] or [ENGBO6H3 or ENGBO7H3]
Exclusion: ENG355Y, (ENG216Y)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC07H3 Canadian Drama

A study of major Canadian playwrights with an emphasis on the creation of a national theatre, distinctive themes that emerge, and their relation to regional and national concerns. This course explores the perspectives of Québécois, feminist, Native, queer, ethnic, and Black playwrights who have shaped Canadian theatre.
Prerequisite: [ENGBO3H3 & ENGBO4H3 & one of ENGB05H3 or (ENGBO1H3) or (ENGBO2H3)] or ENGB06H3 or ENGBO7H3
Alternative prerequisites: [VPDB10H3 & VPDB11H3]
Exclusion: ENG352H, (ENG223H)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC09H3 Canadian Poetry

A study of contemporary Canadian poetry in English, with a changing emphasis on the poetry of particular time-periods, regions, and communities. Discussion focuses on the ways poetic form achieves meaning and opens up new strategies for thinking critically about the important social and political issues of our world.
Prerequisite: [ENGBO3H3 & ENGBO4H3 & one of ENGB05H3 or (ENGBO1H3) or (ENGBO2H3)] or ENGB06H3 or ENGBO7H3
Exclusion: ENG354Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC10H3 Studies in Shakespeare

A study of the plays of Shakespeare. An in-depth study of select plays from Shakespeare's dramatic corpus combined with an introduction to the critical debates within Shakespeare studies. Students will gain a richer understanding of Shakespeare's texts and their critical reception.
Pre-1900 course
Prerequisite: [ENGBO3H3 & ENGBO4H3 & one of ENGB05H3 or (ENGBO1H3) or (ENGBO2H3)] or (ENGBO1H3) and [ENGBO32H3 or ENGBO33H3]
Exclusion: ENG336H
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC12H3 Individualism and Community in American Literature

An exploration of the tension in American literature between two conflicting concepts of self. We will examine the influence on American literature of the opposition between an abstract, "rights-based," liberal-individualist conception of the self and a more traditional, communitarian sense of the self as determined by inherited regional, familial, and social bonds.
ENGC13H3 Ethnic Traditions in American Literature
A survey of the literature of Native Peoples, Africans, Irish, Jews, Italians, Latinos, and East Asians in the U.S., focusing on one or two groups each term. We will look at how writers of each group register the affective costs of the transition from "old-world" communalism to "new-world" individualism.
Prerequisite: [ENGB03H3 & ENGB04H3 & (one of ENGB08H3 & ENGB09H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC15H3 Concepts in Literary Criticism
A study of selected topics in literary criticism.
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG280H, (ENG267H)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC16H3 The Bible and Literature I
Literary analysis of the Hebrew Bible (Christian Old Testament) and its profound influence on literature. This course considers both the literary nature of and the influence on literature of such narratives as the fall of Adam and Eve, Noah's flood, Abraham's binding of Isaac, and the story of Moses, The Song of Solomon, Job, Jonah, Jeremiah. Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG280H, (ENG267H)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC17H3 The Bible and Literature II
Literary analysis of the narratives and other literary forms in the New Testament, and extended consideration of selected literary texts that the New Testament has influenced.
Pre-1900 course.
Prerequisite: ENGB16H3 or (ENGB42H3)
Exclusion: (ENG43H3), (ENG200Y)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC21H3 The Victorian Novel to 1860
A study of major works of Victorian fiction, 1830-1860. This course focuses on the development of the realist novel in its social context. Authors studied might include Charles Dickens, William Makepeace Thackeray, the Bronte sisters, Anthony Trollope and Elizabeth Gaskell.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG324Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC22H3 The Victorian Novel after 1860
A study of major works of Victorian fiction, 1860-1901. This course examines the emergence of the sensation novel, fantasy and science fiction, and high Victorian realism. Authors studied might include George Eliot, Wilkie Collins, George MacDonald, Thomas Hardy, Robert Louis Stevenson, H.G. Wells, Joseph Conrad, or Rudyard Kipling.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG324Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC23H3 Fantasy and the Fantastic in Literature and the Other Arts
A study of fantasy and the fantastic from 1800 to the present. Students will consider various theories of the fantastic in order to chart the complex genealogy of modern fantasy across a wide array of literary genres (fairy tales, poems, short stories, romances, and novels) and visual arts (painting, architecture, comics, and film).
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG239H
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC24H3 Drama: Tragedy
An exploration of major dramatic tragedies in the classic and English tradition. Tragedy has been thought of as one of the earliest and most profound literary forms, having ritual and philosophical implications and inspiring theoretical treatises beginning with Aristotle's Poetics.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Alternative pre/co-requisites: VPDB10H3 & VPDB11H3
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC26H3 Drama: Comedy
An historical exploration of comedy as a major form of dramatic expression. Theatrical comedy has been thought of as having social as well as literary dimensions (healing rifts; providing carnivalesque escape; mocking folly).
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Alternative pre/co-requisites: VPDB10H3 & VPDB11H3
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC27H3 Drama: Comedy
An historical exploration of comedy as a major form of dramatic expression. Theatrical comedy has been thought of as having social as well as literary dimensions (healing rifts; providing carnivalesque escape; mocking folly).
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Alternative pre/co-requisites: VPDB10H3 & VPDB11H3
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC29H3 Chaucer
Selections from The Canterbury Tales and other works by the greatest English writer before Shakespeare. In studying Chaucer's medieval masterpiece, students will encounter a variety of tales and tellers, with subject matter that ranges from broad and bawdy humour through subtle social satire to moral fable.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG300Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC30H3 Studies in Medieval Literature
A study of selected medieval texts by one or more authors.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG311H
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC33H3 Deceit, Dissent, and the English Civil Wars, 1603-1660
A study of the poetry, prose, and drama written in England between the death of Queen Elizabeth in 1603 and the Restoration of the monarchy in 1660. This course will examine the innovative literature of these politically tumultuous years alongside debates concerning personal and political sovereignty, religion, censorship, ethnicity, courtship and marriage, and women's authorship.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG304Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC34H3 Early Modern Women and Literature, 1500-1700
A focused exploration of women's writing in the early modern period. This course considers the variety of texts produced by women (including closet drama, religious and secular poetry, diaries, letters, prose romance, translations, polemical tracts, and confessions), the contexts that shaped those writings, and the theoretical questions with which they engage.
Pre-1900 course
Prerequisite: ENGB50H3 or [ENGB03H3 & ENGB04H3 & one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC35H3 Imagined Communities in Early Modern England, 1500-1700
A study of the real and imagined multiculturalism of early modern English life. How did English encounters and exchanges with people, products, languages, and material culture from around the globe redefine ideas of national, ethnic, and racial community? In exploring this question, we will consider drama, poetry, travel journals, autobiography, letters, cookbook, costume books, and maps.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Recommended Preparation: [ENGB32H3 or ENGB33H3] & [ENGC10H3 or (ENGC32H3) or ENGC33H3]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC36H3 Literature and Culture, 1660-1750
Studies in literature and literary culture during a turbulent era that was marked by extraordinary cultural ferment and literary experimentation. During this period satire and polemical flourished, Milton wrote his great epic, Behn her brilliant comedies, Swift his bitter attacks, and Pope his technically balanced but often viciously biased poetry.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [either ENGB05H3 or (ENGB01H3) & (ENGB02H3)]
Exclusion: ENG305H
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC37H3 Literature and Culture, 1750-1830
An exploration of literature and literary culture during the end of the eighteenth and beginning of the nineteenth centuries. We will trace the development of a consciously national culture, and birth of the concepts of high, middle, and low cultures. Authors may include Johnson, Boswell, Burney, Sheridan, Yearsley, Blake, and Wordsworth.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG322Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC38H3 Novel Genres: Fiction, Journalism, News, and Autobiography, 1640-1750
An examination of generic experimentation that began during the English Civil Wars and led to the novel. We will address such authors as Aphra Behn and Daniel Defoe, alongside news, ballads, and scandal sheets; and look at the book trade, censorship, and the growth of the popular press.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG322Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC39H3 The Early Novel in Context, 1740-1830
A contextual study of the first fictions that contemporaries recognized as being the novel. We will examine the novel in the context of its readers; of neighbouring genres such as letters, non-fiction travel writing, conduct manuals; and of culture more generally. Authors might include Richardson, Fielding, Sterne, Burney, Austen and others.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG322Y
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

ENGC42H3 Romanticism
A study of the Romantic Movement in European literature, 1750-1850. This course investigates the cultural and historical origins of the Romantic Movement, its complex definitions and varieties of expression, and the responses it provoked in the wider culture. Examination of representative authors such as Goethe, Rousseau, Wollstonecraft, Wordsworth, Coleridge, Blake, P. B. Shelley, Keats, Byron and M. Shelley will be combined with study of the philosophical and historical backgrounds of Romanticism.
Pre-1900 course
Prerequisite: ENGB03H3 & ENGB04H3 & [one of
ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: ENG308Y Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC44H3 Self and Other: Dialectics in Fiction**
A study of the relation between self and other in narrative fiction. This course will examine three approaches to the self-other relation: the moral relation, the epistemological relation, and the functional relation. Examples will be chosen to reflect engagements with gendered others, with historical others, with generational others, with cultural and national others. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC47H3 Modern Poetry**
A study of poetry written roughly between the World Wars. Poets from several nations may be considered. Topics to be treated include Modernist difficulty, formal experimentation, and the politics of verse. Literary traditions from which Modernist poets drew will be discussed, as will the influence of Modernism on postmodern writing. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC48H3 Satire**
An investigation of the literatures and theories of the unthinkable, the reformist, the iconiclastic, and the provocative. Satire can be conservative or subversive, corrective or anarchic. This course will address a range of satire and its theories. Writers may range from Juvenal, Horace, Lucian, Erasmus, Donne, Jonson, Rochester, Dryden, Swift, Pope, Gay, Haywood, and Behn to Pynchon, Nabokov and Atwood.
Pre-1900 course Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: (ENG67H1)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC50H3 Studies in Contemporary American Fiction**
Developments in American fiction from the end of the 1950s to the present. A study of fiction from the period that produced James Baldwin, Saul Bellow, Philip Roth, John Updike, Norman Mailer, Ann Beatty, Raymond Carver, Don DeLillo, Toni Morrison, Maxine Hong Kingston, and Leslie Marmon Silko. The course may be organized around themes or movements.
Prerequisite: [ENGB03H3 & ENGB04H3 & one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] or [ENGB08H3 & ENGB09H3]
Exclusion: ENG365H1
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC51H3 Contemporary Arab Women Writers**
A study of Arab women writers from the late nineteenth century to the present. Their novels, short stories, essays, poems, and memoirs invite us to rethink western perceptions of Arab women; therefore, issues of gender, religion, class, nationalism, and colonialism will be examined from Arab women's perspectives, from both the Arab world and North America. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC56H3 Literature and Media: From Page to Screen**
Written literature and film and television. What happens when literature influences film and vice versa, and when literary works are recast as visual media (including the effects of rewriting, reproduction, adaptation, serialization and sequelization). Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC59H3 Geography and Regionalism in Literature**
Analysis of space and place in literature. This course studies representations of space in literature - whether geographical, regional, or topographical - that offer conceptual alternatives to the nation, state, or tribe. Geographical or regional focus may change depending on instructor. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC69H3 Gothic Literature**
A study of the Gothic tradition in literature since 1760. "Gothic" is a dark style in the arts, a language of terror, recognizable by allusions to ruined castles, graveyards, sublime landscapes, religious superstition, and plots involving imprisonment and torture, nightmares of the unconscious mind, and monstrous deformities of the human body.
Pre-1900 course Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Exclusion: (ENGD67H3)
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC70H3 The Immigrant Experience in Literature to 1980**
An examination of twentieth-century literature, especially fiction, written out of the experience of people who leave one society to come to another already made by others. We will compare the literatures of several ethnic communities in at least three nations, the United States, Britain, and Canada. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)]
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**ENGC71H3 The Immigrant Experience in Literature Since 1980**
A continuation of ENGC70H3, focusing on texts written since 1980. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] & ENGC70H3 Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language
ENGC72H3 Contemporary Literature from Africa
A study of fiction, drama, and poetry from English-speaking Africa. The course will examine the relation of English-language writing to indigenous languages, to orality, and to audience, as well as the issues of creating art in a world of suffering and of de-colonizing the narrative of history. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] or AFSA01H3 Exclusion: ENG278Y Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC73H3 Rap Poetics
An intensive study of form and rhetoric in rap lyrics. We will consider the quarter-century recorded history of this subset of African-American poetry in rough chronological order. We will also look for the pre-history of rap in such traditions as minstrelsy, blues, political speech, comic monologues, and lyric poetry proper. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] Exclusion: (ENGD63H3) Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC76H3 The Body in Modernity: Theories and Representations
An interdisciplinary course about the body in art, film, photography, narrative and popular culture. How bodies are written or visualized as "feminine" or "masculine", as heroic, as representing normality or perversity, beauty or monstrosity, legitimacy or illegitimacy, nature or culture. Corequisite: Two full credits at the B-level or above from ENG, WST, VPA, VPH, and/or VPS. Exclusion: (VPAC47H3), (VPHC47H3) Enrolment Limits: 45 Breadth Requirement: Arts, Literature & Language

ENGC77H3 The Body in Contemporary Culture: Theories and Representations
A course focusing on the experience of the body in the public spaces of the modern city and in cyberspace. Of special interest will be the viewpoints of artists, writers, and filmmakers who explore how the "other" is constructed in terms of class, culture, and ethnicity. Corequisite: Two full credits at the B-level or above from ENG, WST, VPA, VPH, and/or VPS. Exclusion: (VPAC48H3), (VPHC48H3) Breadth Requirement: Arts, Literature & Language

ENGC78H3 Dystopian Visions in Fiction and Film
Negative utopias and post-apocalyptic worlds. The course will draw from novels such as 1984, Brave New World, Clockwork Orange, and Oryx and Crake, and films such as Metropolis, Mad Max, Brazil, and The Matrix. Why do we find stories about the world gone wrong so compelling? Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC80H3 Modernist Narrative, 1900-1950
Advanced study of a crucial period for the development of new forms of narrative and the beginnings of formal narrative theory, in the context of accelerating modernity. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC82H3 Cinema Studies: Themes and Theories
A variable theme course that will feature different theoretical approaches to Cinema: feminist, Marxist, psychoanalytic, postcolonial, and semiotic. Thematic clusters include "Madness in Cinema", and "Films on Films". Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC83H3 Studies in World Cinema
Organizes a series of films that are non-Western: African, Asian, Middle Eastern and analyzes them both on their own terms and against the backdrop of issues of colonialism and globalization. Prerequisite: ENGB03H3 & ENGB04H3 & [one of ENGB05H3 or (ENGB01H3) or (ENGB02H3)] Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

ENGC86H3 Creative Writing: Poetry II
An intensive study of the writing of poetry through a selected theme, topic, or author. The course will undertake its study through discussion and workshop sessions. Admission by portfolio. Portfolios should be left with the English departmental assistant in H331A no later than the first Tuesday of August. They should contain a selected sample (5-15 pp.) of your strongest writing, which must include poetry and may include fiction. Do not include originals. Prerequisite: ENGB60H3 Enrolment Limits: 20 Breadth Requirement: Arts, Literature & Language

ENGC87H3 Creative Writing: Fiction II
An intensive study of the writing of fiction through a selected theme, topic, or author. The course will undertake its study through discussion and workshop sessions. Admission by portfolio. Portfolios should be left with the English departmental assistant in H331A no later than the first Monday of October. They should contain a selected sample (5-15 pp.) of your strongest writing, which must include fiction and may include poetry. Do not include originals. Prerequisite: ENGB61H3 Enrolment Limits: 20 Breadth Requirement: Arts, Literature & Language

ENGC88H3 Creative Non-Fiction
An introduction to the writing of creative non-fiction through discussion and workshop sessions. Admission by portfolio. The portfolio should be left with the English departmental assistant in H331A no later than the first Monday of October. It should contain 5-10pp. of your strongest fiction or non-fiction writing. Prerequisite: ENGB60H3 or ENGB61H3 Recommended Preparation: Students should have developed a
small body of creative works before enrolling in this course. Enrolment Limit: 20
Breadth Requirement: Arts, Literature & Language

ENG03H3 Topics in Contemporary Literary Theory
A study of selected topics in recent literary theory.
Prerequisite: 2 C-level courses in English.
Recommended Preparation: ENGC15H3
Enrolment Limits: 22

ENG07H3 Studies in Postmodern Poetry
The study of a poet or poets writing in English after 1950.
Topics may include the use and abuse of tradition, the art and politics of form, the transformations of an oeuvre, and the relationship of poetry to the individual person and to the culture at large.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG08H3 Topics in African Literature
This advanced seminar will provide intensive study of a selected topic in African literature written in English; for example, a single national literature, one or more authors, or a literary movement.
Prerequisite: 2 C-level courses in English or [AFSA01H3 & ENGC72H3]
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG12H3 Topics in Life Writing
A detailed study of some aspect or aspects of life-writing.
Topics may include life-writing and fiction, theory, criticism, self, and/or gender. Can count as a pre-1900 course depending on the topic.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22

ENG14H3 Topics in Early Modern English Literature and Culture
An advanced inquiry into critical questions relating to the development of sixteenth- and seventeenth-century English literature and culture. Focus may include the intensive study of an author, genre, or body of work.
Pre-1900 course
Prerequisite: 2 C-level courses in English.
Enrolment Limits: 22

ENG18H3 Topics in the Long Eighteenth Century, 1660-1830
Topics in the literature and culture of the long eighteenth century. Topics vary from year to year and might include a study of one or more authors, or the study of a specific literary or theatrical phenomenon. Pre-1900 course
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22

ENG19H3 Theoretical Approaches to Early Modern English Literature and Culture
An in-depth study of sixteenth- and seventeenth-century literature together with intensive study of the theoretical and critical perspectives that have transformed our understanding of this literature.
Pre-1900 course
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG26H3 Independent Studies: Creative Writing
Advanced study of creative writing for students who have excelled at the introductory and intermediate levels. Admission by portfolio. Portfolios should be left with the English departmental assistant in H331A no later than the first Tuesday of April for Summer courses, no later than the first Tuesday of August for Fall and Fall/Winter courses and no later than the first Monday of October for Winter courses. They should contain a selected sample (10-20 pp.) of your strongest writing and a five-hundred word proposal stating your goals for the independent study do not include originals.
Note: Students may count no more than 1.0 full credit of D-level independent study towards an English program.
Prerequisite: [ENGB60H3 & ENGC86H3] or [ENGB61H3 & ENGC87H3] & permission of the instructor.

ENG30H3 Topics in Medieval Literature
Topics in the literature and culture of the medieval period. Topics vary from year to year and might include a study of one or more authors.
Pre-1900 course
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22

ENG42H3 Studies in Major Modernist Writers
Advanced study of a selected Modernist writer or small group of writers. The course will pursue the development of a single author’s work over the course of his or her entire career or it may focus on a small group of thematically or historically related writers.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG43H3 Topics in Romanticism, 1750-1850
Topics in the literature and culture of the Romantic movement. Topics vary from year to year and may include Romantic nationalism, the Romantic novel, the British 1790s, or American or Canadian Romanticism.
Pre-1900 course
Prerequisite: 2 C-level courses in English
Recommended Preparation: ENGC42H3
Enrolment Limits: 22

ENG48H3 Studies in Major Victorian Writers
Advanced study of a selected Victorian writer or small group of writers. The course will pursue the development of a single author’s work over the course of his or her entire career or it may focus on a small group of thematically or historically related writers.
Pre-1900 course
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG52H3 Cinema: The Auteur Theory
An exploration of the genesis of auteur theory. By focusing on a particular director such as Jane Campion, Kubrick, John Ford, Cronenberg, Chaplin, Egoyan, Bergman, Godard, Kurosawa, Sembene, or Bertolucci, we will trace the
extent to which a director's vision can be traced through their body of work.
Prerequisite: 2 C-level courses in English
Exclusion: INI374H, INI375H
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENGD57H3 Studies in Major Canadian Writers
Advanced study of a selected Canadian writer or small group of writers. The course will pursue the development of a single author's work over the course of his or her entire career or it may focus on a small group of thematically or historically related writers.
Prerequisite: 2 C-level courses in English
Exclusion: (ENGD51H3), (ENGD88H3)
Enrolment Limits: 22

ENGD58H3 Topics in Canadian Literature
Topics in the literature and culture of Canada. Topics vary from year to year and may include advanced study of ethics, haunting, madness, or myth; a particular city or region.
Prerequisite: 2 C-level courses in English
Exclusion: (ENGD51H3), (ENGD88H3)
Enrolment Limits: 22

ENGD59H3 Topics in American Poetry
This seminar will usually provide advanced intensive study of a selected American poet each term, following the development of the author's work over the course of his or her entire career. It may also focus on a small group of thematically or historically related poets.
Prerequisite: 2 C-level courses in English
Recommended Preparation: ENGB08H3 or ENGB09H3
Enrolment Limits: 22

ENGD60H3 Topics in American Prose
This seminar course will usually provide advanced intensive study of a selected American prose-writer each term, following the development of the author's work over the course of his or her entire career. It may also focus on a small group of thematically or historically related prose-writers.
Prerequisite: 2 C-level courses in English
Recommended Preparation: ENGC12H3
Enrolment Limits: 22

ENGD62H3 Topics in Postcolonial Literature and Film
An exploration of multicultural perspectives on issues of power, perception, and identity as revealed in representations of imperialism and colonialism from the early twentieth century to the present.
Prerequisite: 2 C-level courses in English.
Enrolment Limits: 22

ENGD68H3 Topics in Literature and Religion
Topics might explore the representation of religion in literature, the way religious beliefs might inform the production of literature and literary values, or literature written by members of a particular religious group.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22

ENGD71H3 Studies in Arab North-American Literature
A study of Arab North-American writers from the twentieth century to the present. Surveying one hundred years of Arab North-American literature, this course will examine issues of gender, identity, assimilation, and diaspora in poetry, novels, short stories, autobiographies and nonfiction.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENGD80H3 Women and Canadian Writing
A study of the remarkable contribution of women writers to the development of Canadian writing. Drawing from a variety of authors and genres (including novels, essays, poems, autobiographies, biographies, plays, and travel writing), this course will look at topics in women and Canadian literature in the context of theoretical questions about women's writing.
Prerequisite: 2 C-level courses in English
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENGD84H3 Canadian Writing for the New Century
An analysis of features of Canadian writing at the end of the twentieth and the beginning of the twenty-first century. This course will consider such topics as changing themes and sensibilities, canonical challenges, and millennial and apocalyptic themes associated with the end of the twentieth century.
Prerequisite: 2 C-level courses in English.
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENGD89H3 Topics in the Victorian Period
Topics vary from year to year and might include Victorian children's literature; city and country in Victorian literature; science and nature in Victorian writing; aestheticism and decadence; or steampunk.
Pre-1900 course
Prerequisite: 2 C-level courses in English.
Exclusion: ENG443Y
Enrolment Limits: 22

ENGD91H3 Avant-Garde Cinema
An exploration of Avant-Garde cinema from the earliest experiments of German Expressionism and Surrealism to our own time. The emphasis will be on cinema as an art form aware of its own uniqueness, and determined to discover new ways to exploit the full potential of the "cinematic".
Prerequisite: 2 C-level courses in English
Exclusion: INI322Y
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENGD93H3 Theoretical Approaches to Cinema
Advanced study of theories and critical questions that inform current directions in cinema studies.
Prerequisite: 2 C-level courses in English
Exclusion: INI214Y
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language
ENG94H3 Stranger Than Fiction: The Documentary Film
The study of films from major movements in the documentary tradition, including ethnography, cinema vérité, social documentary, the video diary, and "reality television". The course will examine the tensions between reality and representation, art and politics, technology and narrative, film and audience.
Prerequisite: 2 courses at the C-level in English
Exclusion: INI325Y
Enrolment Limits: 22
Breadth Requirement: Arts, Literature & Language

ENG98Y3 Senior Essay
An intensive year-long seminar that supports students in the development of a major independent scholarly project. Drawing on workshops and peer review, bi-weekly seminar meetings will introduce students to advanced research methodologies in English and will provide an important framework for students as they develop their individual senior essays. Depending on the subject area of the senior essay, this course can be counted towards the pre-1900 requirement.
Prerequisite: Minimum GPA of 3.5 in English courses; 15.0 credits, of which at least 2.0 credits must be at the C-or D-level in English.
Exclusion: ENG490Y
Recommended Preparation: At least on D-level course in English
Enrolment Limit: 15

Environmental Science

Faculty List
B. Greenwood, B.Sc., Ph.D. (Bristol), Ph.D. (Hons. Causa, Uppsala), Professor Emeritus
A.G. Price, B.Sc. (Wales), M.Sc., Ph.D. (McGill), Associate Professor Emeritus
J.A. Westgate, B.Sc. (Reading), Ph.D. (Alberita), Professor Emeritus
D.D. Williams, B.Sc. (North Wales), Dip. Ed. (Liverpool), M.Sc., Ph.D. (Waterloo), D.Sc. (Wales), Professor Emeritus
N. Eyles, B.Sc. (Leicester), M.Sc. (Memorial University NFLD), Ph.D. (East Anglia), D.Sc. (Leicester), P. Geo., Professor
K.W.F. Howard, B.Sc. (Exeter), M.Sc., Ph.D. (Birmingham), P. Geo., C. Geol. F.G.S., P. H.G., Professor
F. Wania, Dipl.Geook. (Bayreuth), Ph.D. (Toronto), Professor
R.R. Fulthorpe, B.Sc., M.Sc. (Toronto), Ph.D. (Carleton), Professor
M.J. Simpson, B.Sc., Ph.D. (Alberta), Professor
G.B. Arhonditis, B.Sc., M.Sc. (Agricultural Univ. of Athens, Greece), Ph.D. (Univ. of the Aegean, Greece), Associate Professor
W.A. Gough, B.Sc. (Waterloo), M.Sc. (Toronto), Ph.D. (McGill), Associate Professor
A. Simpson, B.Sc., Ph.D. (Birmingham), Associate Professor
M. Wells, B.Sc., Ph.D. (Australian National), Associate Professor
M. Dittrich, M.S. (Moscow), Ph.D. (Humbolt), Assistant Professor
M.E. Isaac, Ph.D. (Toronto), Assistant Professor
C. Mitchell, B.Sc. (McMaster), M.Sc., Ph.D. (Toronto), Assistant Professor
M. Meriano, B.Sc., M.Sc., Ph.D. (Toronto), Lecturer
T. Mohsin, B.Sc. (Dhaka), M.Sc. (Dhaka), M.E.S. (Newcastle), Ph.D. (Toronto), Lecturer

Human activity is a major cause of environmental change. Study of the dynamics of both natural and anthropogenic changes requires knowledge spanning many scientific disciplines. Recent environmental degradation such as surface and subsurface water pollution, air and soil pollution, climate change, depletion of resources, extinction of species, and problems of waste disposal are all a result of the lack of understanding of environmental systems and processes. Environmental degradation has an impact not only on human beings but on all species and most natural systems, so that its understanding requires approaches and skills from many disciplines such as biology, chemistry, geology, geography, mathematics, physics, and ecology.

The following programs in Environmental Science are available at UTSC:
• Four Specialist Programs (Environmental Biology, Environmental Chemistry, Environmental Geoscience and Environmental Physics)
• A Major Program in Environmental Science
• A Minor Program in Environmental Science
• In addition a Joint Specialist Program in Environmental Science and Technology is offered in collaboration with the School of Engineering Technology and Applied Science of Centennial College. (For more information see the Environmental Science and Technology section of this Calendar.)

The overall purpose of the various programs in Environmental Science is to provide education and training which will produce highly qualified scientists with excellent field and laboratory experience, with a view to future employment in consulting, government, non-governmental organizations, and research and teaching.
The Specialist Programs in Environmental Biology, Environmental Chemistry, Environmental Geoscience, and Environmental Physics and the Major Program in Environmental Science are eligible for inclusion in the Co-operative Program in Physical Sciences. Refer to the Physical Sciences and the Co-operative Program sections of this Calendar for further details.

Service Learning and Outreach (Previously known as Science Engagement)
For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning
SPECIALIST PROGRAM IN ENVIRONMENTAL BIOLOGY (SCIENCE)

Supervisor of Studies: M. Isaac (416-287-7276) Email: marney.issac@utoronto.ca

Program Requirements

Total requirements: 14.5 full credits

First Year:
- EESA01H3 Introduction to Environmental Science
- EESA06H3 Introduction to Planet Earth
- BIOA01H3 Life on Earth: Unifying Principles
- BIOA02H3 Life on Earth: Form, Function and Interactions
- CHMA10H3 Introductory Chemistry I: Structure and Bonding
- CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
- MATA30H3 Calculus I for Biological and Physical Sciences
- [MATA35H3 Calculus II for Biological Sciences or MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
- [PHYA10H3 Introduction to Physics IA or PHYA11H3 Introduction to Physics IB]

Second Year:
- BIOB50H3 Ecology
- BIOB51H3 Evolutionary Biology
- BIOB52H3 Ecology and Evolutionary Biology Laboratory
- EESB15H3 Earth History
- EESB16H3 Feeding Humans - The Cost to the Planet
- STAB22H3 Statistics I
- [PSCB57H3 Introduction to Scientific Computing or CSCA08H3 Introduction to Computer Programming]

and

1.0 full credit from the following:
- EESB03H3 Principles of Climatology
- EESB04H3 Principles of Hydrology
- EESB05H3 Principles of Soil Science
- CHMB55H3 Environmental Chemistry

Third and Fourth Years:

2.5 credits from:
- EESC03H3 Geographic Information Systems and Remote Sensing
- EESC04H3 Biodiversity and Biogeography
- EESC03H3 Microbial Biogeochemistry
- EESC13H3 Environmental Impact Assessment and Auditing
- EESC15H3 Research in Environmental Science

2.0 credits from:
- BIOC51H3 Tropical Biodiversity Field Course
- BIOC52H3 Ecology Field Course
- BIOC58H3 Biological Consequences of Global Change
- BIOC59H3 Advanced Population Ecology
- BIOC61H3 Community Ecology and Environment Biology
- BIOC65H3 Environmental Toxicology
- BIOC62H3 The Role of Zoos in Conservation
- BIOC63H3 Conservation Biology
- BIOC67H3 Inter-University Biology Field Course

1.0 credit from:
- EESD02H3 Contaminant Hydrogeology
- EESD06H3 Climate Change Impact Assessment
- EESD15H3 Cleaning Up our Mess: Remediation of Terrestrial and Aquatic Environments
- EESC20H3 Geochemistry
- EESD09H3 Research Project in Environmental Science
- EESD10Y3 Research Project in Environmental Sciences
- BIOD52H3 Special Topics in Biodiversity and Systematics
- BIOD60H3 Spatial Ecology
- BIOD66H3 Causes and Consequences of Biodiversity
- BIOD95H3 Supervised Study in Biology
- BIOD98Y3 Research Project in Biology
SPECIALIST PROGRAM IN ENVIRONMENTAL CHEMISTRY (SCIENCE)

Supervisor of Studies: Effie Sauer (416-287-7209 or 416-287-7220 (Alt)) Email: esauer@utsc.utoronto.ca
Advisor: J. Donaldson (416-287-7213)

Program Requirements
Total requirements: 15.0 full credits

First Year:
- EESA01H3 Introduction to Environmental Science
- EESA06H3 Introduction to Planet Earth
- BIOA01H3 Life on Earth: Unifying Principles
- BIOA02H3 Life on Earth: Form, Function and Interactions
- CHMA10H3 Introductory Chemistry I: Structure and Bonding
- CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
- MATA30H3 Calculus I for Biological and Physical Sciences
- [MATA35H3 Calculus II for Biological Sciences or MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
- [PHYA10H3 Introduction to Physics IA or PHYA11H3 Introduction to Physics IB]

Second Year:
- BIOB50H3 Ecology
- CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
- CHMB21H3 Chemical Structure and Spectroscopy
- CHMB41H3 Organic Chemistry I
- CHMB42H3 Organic Chemistry II
- CHMB55H3 Environmental Chemistry
- STAB22H3 Statistics I

and
- 1.0 full credit from the following:
- EESB03H3 Principles of Climatology
- EESB04H3 Principles of Hydrology
- EESB05H3 Principles of Soil Science
- EESB15H3 Earth History

Third Year:
- EESC03H3 Geographic Information Systems and Remote Sensing
- EESC07H3 Groundwater
- EESC13H3 Environmental Impact Assessment and Auditing
- EESC15H3 Research in Environmental Science
- CHMB16H3 Techniques in Analytical Chemistry
- CHMB31H3 Introduction to Inorganic Chemistry
- PSCB57H3 Introduction to Scientific Computing

Fourth Year:
- EESD02H3 Contaminant Hydrogeology
- EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments
- EESC20H3 Geochemistry
- CHMC11H3 Principles of Analytic Instrumentation

and
- 0.5 credit from the following:
- CHMC21H3 Topics in Biophysical Chemistry
- CHMC31Y3 Intermediate Inorganic Chemistry
- CHMC41H3 Intermediate Organic Chemistry
- CHMC47H3 Bio-Organic Chemistry

SPECIALIST PROGRAM IN ENVIRONMENTAL GEOSCIENCE (SCIENCE)

Supervisor of Studies: M. Dittrich (416-208-2786) Email: mdittrich@utsc.utoronto.ca

Program Requirements
Total requirements: 15.0 full credits of which 1.0 must be at the D-level as follows:

First Year:
- EESA01H3 Introduction to Environmental Science
- EESA06H3 Introduction to Planet Earth
- BIOA01H3 Life on Earth: Unifying Principles
Environmental Science

BIOA02H3 Life on Earth: Form, Function and Interactions
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
MATA30H3 Calculus I for Biological and Physical Sciences
[MATA35H3 Calculus II for Biological Sciences or MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]
[PHYA10H3 Introduction to Physics IA or PHYA11H3 Introduction to Physics IB]

Second Year:
BIOB50H3 Ecology
CHMB55H3 Environmental Chemistry
EESB02H3 Principles of Geomorphology
EESB03H3 Principles of Climatology
EESB04H3 Principles of Hydrology
EESB05H3 Principles of Soil Science
EESB15H3 Earth History
PSCB57H3 Introduction to Scientific Computing
STAB22H3 Statistics I

Third Year:
EESC03H3 Geographic Information Systems and Remote Sensing
EESC04H3 Biodiversity and Biogeography
EESC07H3 Groundwater
EESC13H3 Environmental Impact Assessment and Auditing
EESC20H3 Geochemistry
EESC31H3 Principles of Glacial Sedimentology and Stratigraphy
EESC35H3 Mineralogy
EESC36H3 Petrology

and

0.5 credit from the following:
EESC18H3 The Great Lakes: An Introduction to Physical Limnology
EESC19H3 Marine Systems

Fourth Year:
1.0 full credit from the following:
EESC21H3 Urban Environmental Problems of the Greater Toronto Area
EESD02H3 Contaminant Hydrogeology
EESD06H3 Climate Change Impact Assessment
EESD09H3 Research Project in Environmental Science
EESD10Y3 Research Project in Environmental Science
EESD11H3 Process Hydrology
EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments
EESD19H3 Professional Development Seminars in Geoscience

1.0 full credit from any other EES courses

Strongly recommended: EESC16H3 Field Camp I or EESD07H3 Field Camp II

SPECIALIST PROGRAM IN ENVIRONMENTAL PHYSICS (SCIENCE)
Supervisor of Studies: Mathew Wells (416-208-4879 or 416-287-7359 (ALT)) Email: wells@utsc.utoronto.ca
Advisor: M. Wells (416-208-4879) Email: wells@utsc.utoronto.ca

Program Requirements
Total Requirements: 15.5 full credits

First Year:
PHYA10H3 Introduction to Physics IA
PHYA21H3 Introduction to Physics IIA
MATA30H3 Calculus I for Biological and Physical Sciences
MATA36H3 Calculus II for Physical Sciences
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
EESA01H3 Introduction to Environmental Science
EESA06H3 Introduction to Planet Earth
MATA23H3 Linear Algebra I
Second Year:

(PHYB20H3) Vibrations and Waves
PHYB54H3 Mechanics: From Oscillations to Chaos
EESB02H3 Principles of Geomorphology
EESB03H3 Principles of Climatology
EESB04H3 Principles of Hydrology
EESB05H3 Principles of Soil Science
MATB41H3 Techniques of Calculus of Several Variables I
MATB42H3 Techniques of Calculus of Several Variables II

Third Year:

PHYB10H3 Intermediate Physics Laboratory I
(PHYB11H3) Intermediate Physics Laboratory II
PHYC11H3 Intermediate Physics Laboratory II
PHYB21H3 Electricity and Magnetism
PSCB57H3 Introduction to Scientific Computing
STAB22H3 Statistics I
EESB15H3 Earth History
EESC03H3 Geographic Information Systems and Remote Sensing
EESC15H3 Research in Environmental Science
EESC07H3 Groundwater
[EESC18H3 The Great Lakes: An Introduction to Physical Limnology or EESC19H3 Marine Systems]

Fourth Year:

EESC13H3 Environmental Impact Assessment and Auditing
PSCD01H3 The Physical Sciences in Contemporary Society

1.5 full credits from:
CHMB55H3 Environmental Chemistry
EESC21H3 Urban Environmental Problems of the Greater Toronto Area
EESD02H3 Contaminant Hydrogeology
EESD06H3 Climate Change Impact Assessment
EESD09H3 Research Project in Environmental Science
EESD10Y3 Research Project in Environmental Science
EESD11H3 Process Hydrology
EESC20H3 Geochemistry
PSCD10H3 Physical Sciences Project

MAJOR PROGRAM IN ENVIRONMENTAL SCIENCE (SCIENCE)

Supervisor of Studies: C. Mitchell (416-208-2744) Email: carl.mitchell@utoronto.ca

Program Requirements

This program requires 8.5 full credits as follows:

First Year
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Structure and Bonding
[(MATA20H3) Calculus A or MATA30H3 Calculus I for Biological and Physical Sciences]
[(MATA21H3) Calculus B or MATA35H3 or MATA36H3 Calculus II for Biological/Physical Sciences]
[PHYA10H3 or PHYA11H3 Introduction to Physics IA or IB]
EESA06H3 Planet Earth

Second Year
STAB22H3 Statistics I

and

1.5 credits from:
EESB03H3 Principles of Climatology
EESB04H3 Principles of Hydrology
EESB05H3 Principles of Soil Science
EESB15H3 Earth History
EESC16H3 Feeding Humans - The Cost to the Planet

and
0.5 credits from:
BIOB50H3 Ecology
EESB02H3 Principles of Geomorphology
EESB17H3 Hydro Politics and Transboundary Water Resource Management
PSCB57H3 Introduction to Scientific Computing
CHMB55H3 Environmental Chemistry

Third & Fourth Years
2.0 credits from C- & D-level EES courses with at least 0.5 credit at the D-level

MINOR PROGRAM IN ENVIRONMENTAL SCIENCE (SCIENCE)
Supervisor of Studies/Advisor: G. Arhonditsis (416-208-4858) Email: georgea@utsc.utoronto.ca
The Minor Program is designed to provide insights into the basic principles of Environmental Science and its application to current environmental issues. It is intended for students with an interest in environmental issues but who do not have the necessary background for specialization in the field. In addition to science students, it is appropriate for students pursuing a degree in the social sciences or in management and economics.

Program Requirements
Total requirements: 4.0 full credits

First Year:
EESA01H3 Introduction to Environmental Science
EESA06H3 Introduction to Planet Earth

Second Year:
Any 1.5 full credits from the following:
EESB02H3 Principles of Geomorphology
EESB03H3 Principles of Climatology
EESB04H3 Principles of Hydrology
EESB05H3 Principles of Soil Science
EESB15H3 Earth History

Third Year:
1.5 full credits of any other EES courses of which 1.0 full credit must be at the C- or D-level.

MAJOR PROGRAM IN ENVIRONMENTAL SCIENCE - GENERAL ENVIRONMENTAL SCIENCE STREAM (SCIENCE)
This stream has been withdrawn from the curriculum. Every effort will be made to allow students enrolled in the stream to complete it.

MAJOR PROGRAM IN ENVIRONMENTAL SCIENCE - ENVIRONMENTAL BIOLOGY STREAM (SCIENCE)
This stream has been withdrawn from the curriculum. Every effort will be made to allow students enrolled in the stream to complete it.

MAJOR PROGRAM IN ENVIRONMENTAL SCIENCE - WATER SCIENCE STREAM (SCIENCE)
This stream has been withdrawn from the curriculum. Every effort will be made to allow students enrolled in the stream to complete it.

SPECIALIST(JOINT) PROGRAM IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY (SCIENCE)
See the Environmental Science and Technology section of this Calendar for program requirements.

SPECIALIST PROGRAM IN NATURAL SCIENCES (SCIENCE)
See the Physical Sciences section of this Calendar for program requirements.

EESA01H3 Introduction to Environmental Science
The scientific method and its application to natural systems. The physical and biological processes which drive ecosystem functions. Anthropogenic changes in ecosystem functions at local and global scales. Emphasis on the degradation of the atmosphere, soil, water, and biological resources caused by human activity. Renewable and non-renewable resource sustainability.
Breadth Requirement: Natural Sciences

EESA05H3 Environmental Hazards
This course is an investigation of the geological background and possible solutions to major hazards in the environment. Environmental hazards to be studied include: landslides, erosion, earthquakes, volcanic eruptions, asteroid impacts, flooding, glaciation, future climate change, subsidence, and the disposal of toxic wastes. This may be of interest to a wide range of students in the life, social, and physical sciences; an opportunity for the non-specialist to understand headline-making geological events of topical interest. No prior knowledge of the Earth Sciences is required.
Exclusion: GLG103H
Breadth Requirement: Natural Sciences

EESA06H3 Introduction to Planet Earth
This course explores the composition, structure and origin of
the Earth and the physical and biological processes that
operate in and on it; the history of the Earth as revealed in
the rock record. The flows of energy and mass through natural
systems, and the impact of human activity on system
processes, with particular reference to land use change, soil
degradation and atmospheric pollution.
Exclusion: GGR100Y, GLG110H
Breadth Requirement: Natural Sciences

EESA07H3 Water
This course consists of a survey of the planet’s water
resources and the major issues facing the use of water. Topics
include: Earth, the watery planet; water, the last great
resource; Canada’s waters; Ontario’s waters; water and man;
water contamination; and protecting our waters. Case studies
such as the Walkerton tragedy will be studied. No prior
knowledge of environmental science is required.
Breadth Requirement: Natural Sciences

EESA09H3 Wind
A survey of the science, history and applications of wind.
Topics include storms including hurricanes, tornadoes and
mid-latitude cyclones, global circulation, local circulations,
measurement of winds, impact of winds on land surfaces,
wind power, winds and pollution, historical and literary
winds, and contemporary wind research. No prior knowledge
of environmental science is required.
Breadth Requirement: Natural Sciences

EESA10H3 Human Health and the Environment
Because of pollution, our surroundings are becoming
increasingly hazardous to our health. The past century has
seen intense industrialization characterized by the widespread
production and use of chemicals and the intentional and
unintentional disposal of a wide range of waste materials.
This course explores the relationship between the incidence of
disease in human populations and the environmental
pollution. Emphasis will be placed on understanding where
and what pollutants are produced, how they are taken up by
humans and their long term effects on health; the role of
naturally-occurring carcinogens will also be examined. The
course will include a view of risk assessment and toxicology
using case studies. No prior knowledge of environmental or
medical science is required.
Breadth Requirement: Natural Sciences

EESA11H3 Environmental Pollution
This course illustrates the environmental effects of urban
expansion, changing methods of agriculture, industrialization,
recreation, resource extraction, energy needs and the
devastation of war. Drawing on information from a wide
spectrum of topics - such as waste disposal, tourism, the
arctic, tropical forests and fisheries - it demonstrates what we
know about how pollutants are produced, the pathways they
take through the global environment and how we can measure
them. The course will conclude with an examination of the
state of health of Canada’s environments highlighting areas
where environmental contamination is the subject of public
discussion and concern. No prior knowledge of environmental
science is required.
Breadth Requirement: Natural Sciences

EESB02H3 Principles of Geomorphology
The physical and chemical processes responsible for the
development of regolith at the surface of the earth and the
mechanics of entrainment, transport and deposition of mass
by rivers, wind, glaciers, water waves, gravitational stresses,
etc., which control the evolution of surface morphology.
Field excursions and laboratory exercises will allow students
to apply theory to natural systems and to understand the
dynamics of one man-modified geomorphic system.
Prerequisite: [EESA01H3 & EESA06H3]
Breadth Requirement: Natural Sciences

EESB03H3 Principles of Climatology
This is an overview of the physical and dynamic nature of
meteorology, climatology and related aspects of
oceanography. Major topics include: atmospheric
composition, nature of atmospheric radiation, atmospheric
moisture and cloud development, atmospheric motion
including air masses, front formation and upper air
circulation, weather forecasting, ocean circulation, climate
classification, climate change theory and global warming.
Prerequisite: EESA06H3 or EESA09H3
Exclusion: GGR203H, GGR312H
Breadth Requirement: Natural Sciences

EESB04H3 Principles of Hydrology
The water and energy balances; fluxes through natural
systems. Process at the drainage basin scale: precipitation,
evaporation, evapotranspiration, and streamflow generation.
The measurement of water fluxes, forecasting of rainfall, and
streamflow events. Human activity and change in hydrologic
processes.
Prerequisite: EESA01H3 or EESA06H3 or any B-level EES
course.
Exclusion: GGR206H
Breadth Requirement: Natural Sciences

EESB05H3 Principles of Soil Science
A study of the processes of pedogenesis and the
development of diverse soil profiles, their field relationships
and their response to changing environmental conditions.
An examination of the fundamental soil properties of
importance in soil management. An introduction to the
techniques of soil examination in the field, soil analysis in the
laboratory and the basic principles of soil classification.
Prerequisite: EESA01H3 or EESA06H3
Exclusion: GGR205H
Breadth Requirement: Natural Sciences

EESB15H3 Earth History
Planet Earth is at least 4,400 million years old and a
geological record exists for at least the last 3,900 million
years in the form of igneous, metamorphic and sedimentary
rocks. The changing dynamics of convection deep within the
Earth’s mantle and associated super-continent assembly and
breakup along with meteorite impacts, are now recognized as
the major controls on development of the planet’s atmosphere,
oceans, biology, climate, and geo-chemical cycles. This
course reviews this long history and the methods and
techniques used by geologists to identify ancient
environments.
Prerequisite: [EESA01H3 & EESA06H3]
Breadth Requirement: Natural Sciences
EESB16H3 Feeding Humans - The Cost to the Planet
Examines the origins and systems of production of the major plants and animals on which we depend for food. Interactions between those species and systems and the local ecology will be examined, looking at issues of over harvesting, genetic erosion, soil erosion, pesticide use, and impacts of genetically modified strains. Prerequisite: BIOA01H3 & BIOA02H3
Breadth Requirement: Natural Sciences

EESB17H3 Hydro Politics and Transboundary Water Resources Management
Competitive use of water resources between countries is common; population and economic growth are exacerbating this. The socio-political, environmental, and economic aspects of transboundary water transfers are explored; the success of relevant international treaties and conventions, and the potential for integrated management of transboundary waters are assessed. Examples from Asia, Africa, and the Middle East are presented. Prerequisite: EESA01H3 or EESA07H3
Breadth Requirement: Social & Behavioural Sciences

EESC03H3 Geographic Information Systems and Remote Sensing
This course focuses on the use of Geographic Information Systems (GIS) and Remote Sensing (RS) for solving a range of scientific problems in the environmental sciences and describing their relationship with and applicability to other fields of study (e.g. geography, computer science, engineering, geology, ecology and biology). Topics include (but are not limited to): spatial data types, formats and organization; geodatabase and coordinate systems; remotely sensed image manipulation and analysis; map production. Prerequisite: EESA06H3 & 1.5 full credits in B- or C-level EES courses. Recommended Preparation: A prior introductory GIS course and some experience with the use of computers (Windows or Unix-based.)
Breadth Requirement: Quantitative Reasoning

EESC04H3 Biodiversity and Biogeography
Theoretical and practical aspects of the evolution of organismal diversity in a functional context; examination of species distributions and how these are organized for scientific study. Emphasis will be on the highly diverse invertebrate animals. Topics include biomes, dispersal, adaptation, speciation, extinction, and the influence of climate history and humans. Prerequisite: BIOB50H3
Breadth Requirement: Natural Sciences

EESC07H3 Groundwater
Groundwater represents the world's largest and most important fresh water resource. This basic course in groundwater introduces the principles of groundwater flow and aquifer storage and shows how a knowledge of these fundamental tools is essential for effective groundwater resource management and protection. Special emphasis is placed on the practical methods of resource exploration and assessment; examples of the approach are given for aquifers under environmental stress in southern Ontario, the US and Africa. Prerequisite: EESA06H3 & 1.0 full credit in B-level EES courses
Breadth Requirement: Natural Sciences

EESC13H3 Environmental Impact Assessment and Auditing
To familiarize students with the relevant legislation, qualitative and quantitative approaches and applications for environmental impact assessments and environmental auditing. The focus will be on the assessment of impacts to the natural environment, however, socio-economic impacts will also be discussed. Environmental auditing and environmental certification systems will be discussed in detail. Examples and case studies from forestry, wildlife biology and land use will be used to illustrate the principles and techniques presented in the course. Students will acquire "hands-on" experience in impact assessment and environmental auditing through case studies. Prerequisite: 2.5 full credits of EES courses Exclusion: GGR393H
Breadth Requirement: Natural Sciences

EESC15H3 Research in Environmental Science
Concepts and methods developed in Environmental Science will be applied to practical environmental problems, within the framework of individual or group projects; a research proposal and a research seminar will be produced. The course is also designed to ensure interaction between students from disparate streams of environmental science through participation in joint seminars with faculty and with environmental practitioners from the community at large. Prerequisite: Permission of coordinator
Breadth Requirement: Natural Sciences

EESC16H3 Field Camp I
Many environmental problems can only be assessed by collecting geological and other environmental data in the field. This course will provide students with the necessary skills for fieldwork investigations in a range of environments. The camp is held annually either in May or late August. Locations for the camp include Costa Rica, the Rockies, Arizona, and the Appalachians. Prerequisite: Permission of the instructors. Recommended Preparation: EESB15H3
Breadth Requirement: Natural Sciences

EESC18H3 The Great Lakes: An Introduction to Physical Limnology
North America is endowed with eight of the twelve largest fresh-water lakes in the world. The hydrodynamics and hydraulics of the Canadian Great Lakes are used as examples of large lacustrine systems. Fundamental concepts in physical and biological limnology are related to features found in the Great Lakes. Topics include: classification and origin of lakes, temperature structure, seasonal circulation, heat budgets, Langmuir circulation, seiches, waves and water levels, eutrophication and invasive species. Prerequisite: EESB03H3
Recommended Preparation: EESB02H3
Breadth Requirement: Natural Sciences

EESC19H3 Marine Systems
The world's oceans constitute more than 70% of the earth's surface environments. This course will introduce students to the dynamics of ocean environments, ranging from the deep ocean basins to marginal seas to the coastal ocean. The large-scale water circulation is examined
from an observationally based water mass analysis and from a theoretical hydro-dynamical framework. The circulation of marginal seas, the role of tides, waves, and other currents are studied in terms of their effects upon the coastal boundary.

Prerequisite: EESB03H3
Recommended Preparation: EESB02H3

Breadth Requirement: Natural Sciences

EESC20H3 Geochemistry

The course will cover fundamental aspects of chemical processes occurring at the Earth’s surface. Terrestrial and aquatic geochemical processes such as: mineral formation and dissolution, redox, aqueous-solid phase interactions, stable isotopes and organic geochemistry in the environment will be covered.

Prerequisite: CHMA10H3, CHMA11H3, and 1.0 credit from any of EESB02H3, EESB04H3, EESB05H3, and EESB15H3.
Exclusions: (EESD32H3), CHM210H, GLG202H, GLG351H

Breadth Requirement: Natural Sciences

EESC21H3 Urban Environmental Problems of the Greater Toronto Area

Urban areas such as the GTA are the focus of many acute environmental problems such as the disposal of solid and liquid wastes, and the contamination of soil, air and water by industrial activity. Specific cases of such problems drawn from the GTA will be reviewed, with reference to field investigations, environmental audits, due diligence and remedial solutions. Students will carry out their own field investigations and will report on specific issues, paying particular regard to government legislation and guidelines issued by regulatory agencies. This course is essential to students in the Environmental Science Program, but is also directly relevant to business and management students.

Prerequisite: 10 full credits in an EES Program.
Breadth Requirement: Natural Sciences

EESC24H3 Advanced Readings in Environmental Science

An advanced supervised readings course that can be taken in any session. Students will follow structured independent readings in any area of Environmental Science. A description of the objectives and scope of the individual offering must be approved by the Supervisor of Studies. Two papers are required in the course; the supervisor and one other faculty member will grade them. The course may not be used as a substitute for EES Program requirements.

Prerequisite: A minimum GPA of 2.5, and 3 full credits in EES courses. Permission of the Supervisor of Studies.

EESC30H3 Microbial Biogeochemistry

This course examines the diversity of microorganisms, their adaptations to special habitats, and their role in the ecosystem and geochemical cycling. Other topics include microbial phylogeny, physiological diversity, species interactions, and state of the art methods of detection and enumeration.

Prerequisite: CHMA10H3 & CHMA11H3 & BIOB50H3 & BIOB51H3
Exclusion: (BGYC55H3)

Breadth Requirement: Natural Sciences

EESC31H3 Principles of Glacial Sedimentology and Stratigraphy

The last 2.5 million years has seen the repeated formation of large continental ice sheets over North America and Europe. The landscape of Ontario is a fossil landscape inherited from the last Laurentide Ice Sheet that disappeared only 10,000 years ago; much of southern Ontario is buried by glacial sediments and the Great Lakes are the direct result of glaciation. The course will review the cause of glaciations and their geological and geomorphological effects paying special regard to the long record of past glacial and interglacial climates preserved in the Toronto region.

Prerequisite: EESA06H3

Breadth Requirement: Natural Sciences

EESC33H3 Environmental Science Field Course

A field course on selected topics in aquatic environments. Aquatic environmental issues require careful field work to collect related hydrological, meteorological, biological, and other environmental data. This hands-on course will teach students the necessary skills for fieldwork investigations on the interactions between air, water, and biota.

Prerequisite: 1.5 full credits at the B-level or higher in EES & permission of instructor.
Exclusion: (EEB310H)
Enrolment Limits: 20

Breadth Requirement: Natural Sciences

EESC34H3 Sustainability in Practice

This course is intended for students who would like to apply theoretical principles of environmental sustainability learned in other courses to real world problems. Students will identify a problem of interest related either to campus sustainability, a local NGO, or municipal, provincial, or federal government. Class meetings will consist of group discussions investigating key issues, potential solutions, and logistical matters to be considered for implementation of proposed solutions. Students who choose campus issues will also have the potential to actually implement their solutions. Grades will be based on participation in class discussions, as well as a final report and presentation.

Prerequisite: Enrolment in the Environmental Studies major program and 9.5 credits
Enrolment Limit: 20

Breadth Requirement: Natural Sciences

EESC35H3 Mineralogy

A comprehensive introduction to crystalline structure, crystal chemistry, bonding in rock forming minerals, and optical properties in minerals. The course includes laboratory exercises on the identification of minerals in hand specimen, and identification of minerals using polarizing microscopes.

Prerequisite: CHMA10H3, CHMA11H3, EESA06H3
Exclusions: (EESC32H3), GLG423H
Enrolment Limit: 20

Breadth Requirement: Natural Sciences

EESC36H3 Petrology

This course surveys the processes that produce the chemical and mineralogical diversity of igneous, sedimentary, and
metamorphic rocks including: the distribution, chemical, and mineral compositions of rocks of the mantle and crust, their physical properties and their relation to geological environments. Descriptive petrology for various rocks will also be covered.
Prerequisite: EESC35H3
Exclusions: (EESC32H3), GLG440H
Recommended Preparation: EESB15H3
Enrolment Limit: 20
Breadth Requirement: Natural Sciences

EESD02H3 Contaminant Hydrogeology
Natural hydrochemical processes; the use of major ions, minor ions, trace metals, and environmental isotopes in studying the occurrence and nature of ground water flow. Point and non-point sources of ground water contamination and the mechanisms of contaminant transport.
Prerequisite: At least 1 full credit in Environmental Science at the C-level.
Breadth Requirement: Natural Sciences

EESD06H3 Climate Change Impact Assessment
Climate change over the last 150 years is reviewed by examining the climate record using both direct measurements and proxy data. Projection of future climate is reviewed using the results of sophisticated climate modeling. The climate change impact assessment formalism is introduced and applied to several examples. Students will acquire practical experience in climate change impact assessment through case studies.
Prerequisite: EESB03H3
Breadth Requirement: Natural Sciences

EESD07H3 Field Camp II
This field camp will familiarize students with several geological settings and modern environments. The camp is held annually either in May or late August. Locations for the camp include Costa Rica, the Rockies, Arizona, and the Appalachians.
Prerequisite: EESC16H3 & permission of the instructors
Breadth Requirement: Natural Sciences

EESD09H3 EESD10Y3 Research Project in Environmental Science
The design, implementation, and reporting of a substantial research project involving laboratory and/or fieldwork. Existing faculty research allows a broad range of possible topics. The course should be undertaken after the end of the 3rd Year, subject to faculty availability. Faculty permission and supervision is required; open only to those students who have either completed or are undertaking specialist courses in the area of intended study. Students having a B+ or higher standing may be eligible for summer financial support from research projects. Permission of the co-ordinator must be obtained.
Prerequisite: EESC15H3
Exclusion: GLG470Y, GLG471H

EESD11H3 Process Hydrology
Prerequisite: EESB04H3
Breadth Requirement: Natural Sciences

EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatic Environments
This course consists of a study of the ways in which hazardous organic and inorganic materials can be removed or attenuated in natural systems. The theory behind various technologies, with an emphasis on bioremediation techniques and their success in practice. An introduction to the unique challenges associated with the remediation of surface and ground water environments, soils, marine systems, and contaminated sediments.
Prerequisite: BIOA01H3 & BIOA02H3 & CHMA10H3 & CHMA11H3 & [PHYA10H3 or PHYA11H3]
Breadth Requirement: Natural Sciences

EESD16H3 Project Management in Environmental Studies
Students will select a research problem in an area of special interest. Supervision will be provided by a faculty member with active research in geography, ecology, natural resource management, environmental biology, or geoscience as represented within the departments. Project implementation, project monitoring and evaluation will form the core elements for this course.
Prerequisite: Enrolment in the Environmental Studies major program and 14.5 credits
Enrolment Limit: 30
Breadth Requirement: Natural Sciences

EESD17Y3 Cohort Capstone Course in Environmental Studies
This course is designed to provide a strong interdisciplinary focus on specific environmental problems including the socioeconomic context in which environmental issues are resolved. The cohort capstone course is in 2 consecutive semesters, providing final year students the opportunity to work in a team, as environmental researchers and consultants, combining knowledge and skill-sets acquired in earlier courses. Group research to local environmental problems and exposure to critical environmental policy issues will be the focal point of the course. Students will attend preliminary meetings schedules in the Fall semester.
Prerequisite: Enrolment in the Environmental Studies major program and 14.5 credits
Enrolment Limit: 30
Breadth Requirement: Natural Sciences

EESD18H3 Environmental Studies Seminar Series
This course will be organized around the DPES seminar series, presenting guest instructors around interdisciplinary environmental themes. Students will analyze major environmental themes and prepare presentations for in-class debate.
Prerequisite: Enrolment in the Environmental Studies major program and 14.5 credits
Breadth Requirement: Natural Sciences

EESD19H3 Professional Development Seminars in Geoscience
This course consists of 12 lectures given by senior industry professionals to prepare students for a post-graduate career in
environmental consulting. Lectures will convey the full range of consulting activities including visits to environmental investigation sites in the Toronto area. Technical writing and oral communication skills will be stressed in assignments.

Environmental Science and Technology

SPECIALIST (JOINT) PROGRAM IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY (SCIENCE)

Supervisor of Studies: Mandy Meriano (416-208-2775) Email: mmeriano@utsc.utoronto.ca

This program is offered in collaboration with The School of Engineering Technology and Applied Science at Centennial College. The program leads to an Honours B.Sc. Degree from UTSC and the Environmental Protection Technologist Diploma from Centennial College, all within the normal course-load requirements for Specialist programs. This program is a valuable option that prepares graduates with a combination of key theoretical and practical skills to work in the environmental field. UTSC and Centennial College bring together in this program considerable strengths, expertise and excellent facilities in support of environmental science education and training. Students graduate from the Joint program with the quantitative and analytical skills necessary to undertake a range of careers in industry, government and non-government organizations. There is at present an unmet demand for expertise in this area in the Canadian labour market. Graduates are also excellent candidates to continue on to graduate studies in pursuit of advanced degrees in environmental science, such as the department's Master of Environmental Science program.

Guidelines for 1st year course selection

Students who intend to pursue this program should include BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, MATA30H3, MATA36H3 & [PHYA10H3 or PHYA11H3] in their 1st year course selection.

Program Admission

Students should request the program through ROSI. Enrolment is limited. Students may apply for admission to the program after completing 4.0 full credits, including 1.0 credit in Environmental Science, and a 0.5 credit in each of Chemistry, Biology, Mathematics and Physics.

Program Requirements

Students must complete 16.0 full credits, as follows:

1. Introductory (3.5 credits):
   a. EESA01H3 Introduction to Environmental Science
      and
      EESA06H3 Introduction to Planet Earth
   b. CHMA10H3 Introductory Chemistry I: Structure and Bonding
      and
      CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
   c. BIOA01H3 Life on Earth: Unifying Principles
      and
      BIOA02H3 Life on Earth: Form, Function and Interactions
   d. STAB22H3 Statistics
      or
      PSCB57H3 Introduction to Scientific Computing

2. Fundamentals and Principles (3.5 credits):
   a. BIOB50H3 Ecology
      and
      [PHYA10H3 Introduction to Physics IA
      or
      PHYA11H3 Introduction to Physics IB]
   b. MATA30H3 Calculus I for Biological and Physical Sciences
      and
      MATA36H3 Calculus II for Physical Sciences
   c. 1.5 credits of the following:
      EESB02H3 Principles of Geomorphology
      EESB03H3 Principles of Climatology
      EESB04H3 Principles of Hydrology
      EESB05H3 Principles of Soil Science
      EESB15H3 Earth History
      EESB16H3 Feeding Humans - The Cost to the Planet
3. Applied and Technical (6.0 credits):
(These courses are taught at the Centennial HP Science and Technology Centre.)
   a. *IMCB01H3 Microbiology Basics
      *STEB21H3 Organic Chemistry and Application
      *STEB07H3 Analytical Chemistry and Applications
      *STEB40H3 Applied Environmental Microbiology
      STEC11H3 Applied Microbiological Analysis
      STEC15H3 Applied Analytical Instrumentation
   b. *STEB42H3 Water Quality Control
      *STEB43H3 Engineering Equipment and Processes
      STEC60H3 Applied Hydrology and Spills Management
      STEC61H3 Hazardous Wastes and Modern Industrial Processes
   c. *STEB44H3 Environmental Legislation and Regulations
      and
      [STEC53H3 Environmental Audits, Sampling and Data Management
      or
      EESC13H3] Environmental Impact Assessment and Auditing

4. Advanced
   2.0 credits from:
   EESC03H3 Geographic Information Systems and Remote Sensing
   EESC04H3 Biodiversity and Biogeography
   EESC07H3 Groundwater
   EESC18H3 The Great Lakes: An Introduction to Physical Limnology
   EESC19H3: Marine Systems
   EESC21H3: Urban Environmental Problems of the Greater Toronto Area
   EESC24H3: Advanced Readings in Environmental Science
   EESC30H3 Microbial Biogeochemistry
   and
   1.0 credit from:
   Any D-level EES course

* A minimum grade of 60% is required in courses marked with an asterisk in order to maintain standing in the program.

**STEB07H3 Analytical Chemistry and Applications**
Quantitative analysis with pharmaceutical precision and accuracy to industrial and environmental protocols. Standard wet chemistry and instrumental techniques, data analysis and presentation. Conformity with health, safety and environmental regulatory requirements. Limited to students enrolled in the Joint Specialist Program in Environmental Science and Technology or the Joint Specialist Program in Applied Microbiology.
Prerequisite: IMCB03H3 or CHMA11H3 and permission of instructor.
Note: CHMC11H3 or CHMB16H3 may be taken after STEB07H3, but STEB07H3 cannot be taken after CHMC11H3 or CHMB16H3.
Exclusion: CHMC11H3, CHMB16H3.
Breadth Requirement: Natural Sciences

**STEB21H3 Organic Chemistry and Applications**
An introduction to the theory and practical applications of organic chemistry. An introduction to the principles of structure, properties identification and reactions of organic compounds as related to biology and other areas of science. Enrolment is limited to students enrolled in the Joint Specialist Program in Environmental Science and Technology. Prerequisite: CHMA11H3
Exclusion: CHMB41H3 & CHMB42H3
Note: CHMB41H3 and CHMB42H3 may be taken after STEB21H3, but STEB21H3 may not be taken after CHMB41H3 or CHMB42H3.
Breadth Requirement: Natural Sciences

**STEB40H3 Applied Environmental Microbiology**
The principles of Environmental Biology: water, air and soil testing procedures. Analysis of contaminated and spiked samples using Ministry of Environment and Industry standards, procedures and protocols. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology
Prerequisite: BIOA02H3 & IMCB01H3
Breadth Requirement: Natural Sciences

**STEB42H3 Water Quality Control**
The characteristics of raw water and wastewater, water supply systems, sources of supply, methods of treatment, alternative sources of water and methods of distribution. The disposal of wastewater, the collection system and sewage treatment methods. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology
Breadth Requirement: Natural Sciences

**STEB43H3 Engineering Equipment and Processes**
Energy and mass in engineering systems, hydrostatics, fluid flow, Bernoulli's theorem. Pumping systems, head losses through hydraulic systems, the efficiency of pumps and motors. Process equipment systems with emphasis on pumps, pipes and valves. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology. Prerequisite: PHYA10H3 or PHYA11H3
Breadth Requirement: Natural Sciences
STEB44H3 Environmental Legislation and Regulations
The concepts of law and legal process as they apply in Canada. The Ontario Environmental Protection Act and other environmental legislation. Research on selected Canadian statutes with a written report and oral presentation. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Breadth Requirement: Natural Sciences

STEC11H3 Applied Microbiological Analysis
The basic principles of Environmental Microbiology, immunology, molecular biology and genetics and toxicity testing using microorganisms. Laboratories are performed using current Ministry of Environment methodologies.
Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Prerequisite: STEB40H3
Breadth Requirement: Natural Sciences

STEC15H3 Applied Analytical Instrumentation
The theory and practices of chemical sampling and analysis used by the Ministry of Environment and Energy. The emphasis will be on the analysis of environmental samples using MOEE procedures and College equipment.
Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Prerequisite: CHMA11H3 & STEB07H3
Exclusion: CHMC16H3 Note: STEC15H3 may not be taken after CHMC16H3, but CHMC16H3 may be taken after STEC15H3.
Breadth Requirement: Natural Sciences

STEC53H3 Environmental Audits, Sampling and Data Management
Ministry approved Industrial Auditing protocols. The presentation and manipulation of graphs, spreadsheets and tests, using popular software titles. The ISO series, with emphasis on EMS and ISO 14001. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Exclusion: STEC53H3 may not be taken after or concurrently with EESC13H3.
Breadth Requirement: Natural Sciences

STEC60H3 Applied Hydrology and Spills Management
The movement of water in its natural state; techniques to measure and control the flow of surface and subsurface water. Current techniques to prevent contamination of subsurface water and surface water by chemical spills. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Prerequisite: EESC04H3 & STEB42H3
Breadth Requirement: Natural Sciences

STEC61H3 Hazardous Wastes and Modern Industrial Processes
Each student will be assigned research on a different pollutant, which might be one of the following: heavy metal ions in water, mercury, aromatic solvents, polymeric resins, PCB's, halogenated solvents, organic acids, Freon or pesticides. Limited to students enrolled in the Joint Specialist program in Environmental Science and Technology.
Prerequisite: CHMA11H3 & STEB21H3 & STEB07H3
Breadth Requirement: Natural Sciences

IMCB01H3 Microbiology Basics
See the Applied Microbiology (formerly Industrial Microbiology) section of this Calendar for a full description.

French
Faculty List
C. Bertrand-Jennings, L. ès L. (Paris), Ph.D. (Wayne State), Professor Emerita
L.E. Doucette, B.A. (London), Ph.D. (Brown), Professor Emeritus
S. Mittler, M.A. (Toronto), Ph.D. (Strasbourg), Associate Professor
J. Ndayiragije, M.A. (Montreal-UQAM), Ph.D. (Montreal-UQAM), Associate Professor
P. Riendeau, M.A., Ph.D. (Montreal), Assistant Professor
C. Beauquis, M.A., Ph.D. (Western), Senior Lecturer
K. McCrindle, M.A., Ph.D. (Toronto), Senior Lecturer
F. Mugnier, M.A. (Lyon), Ph.D. (Grenoble), Senior Lecturer
J. English, M.A., Ph.D. (Toronto), Lecturer
M. Tsimenis, B.A. (Athens), M.A., Ph.D. (Montreal), Lecturer

Program Director: Until June 30- K. McCrindle Email: mccrindle@utsc.utoronto.ca; from July 1- TBA

Studies in French allow for a wide range of interests: the enhancement of practical language skills, including translation, pronunciation and business French (FREA17H3, FREB08H3, FREB17H3, FREB18H3, FREB44H3, FREC18H3); the study of how the language is structured (FREB43H3, FREB45H3, FREC45H3, FREC46H3, FREC47H3, FREC49H3); the development of approaches to the teaching of French (FREB11H3, FREB20H3, FREC11H3); and the exploration of the rich literatures and cultures of French Canada, France and other parts of the francophone world.

Students are also encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their French studies. The following Programs are offered at University of Toronto Scarborough: a Minor Program in French; a Minor Program in French for Francophones; a Major in French; and a Specialist Program in French which can be completed either as a specialist program in its own right or as part of the Concurrent Teacher Education Program (CTEP).
Guidelines for course selection:

French studies normally begin with FREA01H3 Language Practice I, which serves to consolidate previous knowledge, and is the prerequisite for more advanced courses in all areas. FREA01H3 is designed primarily for students with Grade 12 French or equivalent competence. Those who have significant "immersion" or "enriched" high school experience, or who have native or near-native abilities in French, should consult the faculty member responsible for FREB01H3 or FREC01H3 about the appropriate entry course(s). Students without Grade 12 French may wish to take FREA96H3 Introductory French I, FREA97H3 Introductory French II, FREA98H3 Intermediate French I or FREA99H3 Intermediate French II. Incoming students must register in the course appropriate to their level of language skill, based on the results of a placement test.

The placement test is MANDATORY for all students who register for the first time in FREA96H3, FREA97H3, FREA98H3 or FREA99H3. University of Toronto students who have already taken FSL100H or FSL101H do not need to write the placement test. Please check the Humanities French webpage for details: www.utsc.utoronto.ca/~humdiv/LangandLing/fre_studyguide/overview/htm. If you experience difficulties in logging in or if you wish to write the test at the Department of Humanities, please write to french-placement@utsc.utoronto.ca for assistance or to book an appointment. The Department STRONGLY RECOMMENDS that the placement test be completed prior to registration.

Students with a Grade 12 French credit should proceed directly to FREA01H3 and higher-level courses (some exceptions may apply with the permission of the Program Supervisor). Note that the Language Practice courses FREA01H3 & FREA02H3, FREB01H3 & FREB02H3, FREC01H3 & FREC02H3 and FRED01H3 & FRED06H3 must be taken in sequence. Normally, an A-level FRE course should not be taken at the same time as, or after, a B-level FRE course. Please do not hesitate to consult Program Supervisors and other faculty members for further advice about course selection and Programs.

The Study Elsewhere Program offers ideal opportunities for students of French to earn academic credit while studying in another province or country. For further information about this Program and about Letters of Permission, please refer to "Study at Other Universities" in this Calendar, and speak to our Program Supervisor.

Students with Grade 12 French who took Summer Bursary Program courses prior to attending U of T must see the Program Supervisor during the first week of classes. After assessing the course, the Program Supervisor will advise the student as to the appropriate level in which to register. Failure to seek advice at that time may result in a loss of credit to which the student is entitled. Students must consult the Program Supervisor about possible exclusions if they are considering registering in French courses in the Faculty of Arts and Science or at University of Toronto Mississauga. Failure to do so may leave the student short a course for degree credit and thus delay graduation and increase tuition fees.

Language Citation

U of T Scarborough offers a growing range of language opportunities and, as students seek international study, work opportunities and post-graduate study, they may be assisted by a notation of language proficiency. The Language Citation provides that notation. See the Language Citation section of the Calendar for more information.

SPECIALIST PROGRAM IN FRENCH (ARTS)

Undergraduate Advisor Email: fre-undergrad-advisor@utsc.utoronto.ca

This program is designed to provide students with a fundamental knowledge and grasp of principles and practices in core areas of French: language, grammar, linguistics, literature and culture. It can be completed either as a Specialist Program in its own right or as part of the Concurrent Teacher Education Program (CTEP) in French. For more information on CTEP, see the Concurrent Teacher Education section of this Calendar.

Program Requirements

This program requires 12.0 credits as follows including at least 4.0 credits at the C- or D-level of which at least 1.0 must be at the D-level:

1. 4.0 credits consisting of:
   - FREA01H3 Language Practice
   - FREA02H3 Language Practice II
   - FREB01H3 Language Practice I
   - FREB02H3 Language Practice IV
   - FREC01H3 Language Practice V
   - FREC02H3 Language Practice VI
   - FRED01H3 Language Practice VII: Written French
   - FRED06H3 Language Practice VIII: Oral French
   (Except where substitution of other French credits is permitted for students with special proficiency in the French language)

2. 2.5 credits selected from:
   - FREB43H3 Understanding French Grammar
   - FREB44H3 Introduction to Linguistics: French Phonetics and Phonology
   - FREB45H3 Introduction to Linguistics: French Morphology and Syntax
   - FREC12H3 Semantics: The Study of Meaning
   - FREC45H3 Morphology
   - FREC46H3 Syntax II
FREC47H3 Special Topics in Linguistics: Pidgin and Creole Languages
FREC48H3 Sociolinguistics of French
FRED46H3 Field Methods in Linguistics
(FRED49H3 French Semantics)

3. 1.5 credits selected from:
  FREB22H3 The Society and Culture of Québec
  FREB27H3 Modern France
  FREB28H3 The Francophone World
  FREB70H3 Cinema of the Francophone World
  FREB84H3 Folktale, Myth and the Fantastic in the French-Speaking World
  FREC83H3 Cultural Identities and Stereotypes in the French-Speaking World

4. 3.0 credits in literature which must include: one full credit in French Canadian literature; one full credit in French literature (FREB50H3, FREB51H3 and FREB55H3 can fulfill this requirement); one-half credit in literature from other parts of the French-speaking world excluding France and Canada, one-half credit of your choice.

5. 1.0 additional credit in French.
   Note: CTEP students should choose two subject-specific half credit courses focusing on teaching French.
   Note: Specialist students (including CTEP) cannot obtain more than 0.5 credit (out of 12.0) by taking a course in English. This does not include the CTEP courses taught in English through OISE.

MAJOR PROGRAM IN FRENCH (ARTS)
   Undergraduate Advisor Email: fre-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete 7.0 credits in French, of which at least 2.0 credits must be at the C- or D-level, including:

1. FREA01H3, FREA02H3, FREB01H3 and FREB02H3 (except where the Program Supervisor permits substitution of other FRE courses for students with special proficiency in the French language).
2. One further full credit in language.
3. One full credit in literature and/or culture.
   Literature courses are: FREB20H3, FREB35H3, FREB36H3, FREB37H3, FREB50H3, FREB51H3, FREB55H3, (FREB60H3), FREC38H3, FREC36H3, FREC61H3, FREC63H3, FRED12H3
   Culture courses are: FREB22H3, FREB27H3, FREB28H3, FREB70H3, FREB84H3, FREC83H3.
4. Three additional full credits in French

Note: At the A-level, only FREA01H3 and FREA02H3 may be counted towards a French Program.
Note: For Co-op opportunities related to the Major Program in French please see the Humanities and Social Sciences Co-operative section in this Calendar.
Note: Major students cannot obtain more than 0.5 credits (out of 7.0) by taking a course taught in English.

MINOR PROGRAM IN FRENCH (ARTS)
   Program Supervisor: P. Riendeau (416-287-7167) Email: pascal.riendeau@utoronto.ca

Program Requirements
Students should complete four full credits including: FREA01H3, FREA02H3, FREB01H3 and FREB02H3, plus two further credits in French. At least one full credit must be at the C-level.

MINOR PROGRAM IN FRENCH FOR FRANCOPHONES (ARTS)
   Undergraduate Advisor Email: fre-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students in this Program must complete at least four full credits at the B- and C-levels, excluding FREB01H3, FREB02H3 and FREB17H3. At least one full credit must be at the C-level.

MINOR PROGRAM IN FRENCH AS A SECOND LANGUAGE (ARTS)
This program has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in it are able to complete it. Students who had planned to enrol in it in 2010/2011 may want to consider enrolling instead in the Minor Program in French.
FREA96H3 Introductory French I
An intensive basic course in written and spoken French; comprehension, speaking, reading and writing. This intensive, practical course is designed for students who have no previous knowledge of French. The placement test is mandatory for all students (even complete beginners) who register for the first time. The Department strongly recommends that the placement test be completed prior to registration.
Exclusion: (LGGA21H3), (LGGA22H3), (LGGB23H3), (LGGB24H3), FSL100H1 or equivalent
Enrolment Limits: 30 per section
Breadth Requirement: Arts, Literature & Language

FREA97H3 Introductory French II
An intensive course in written and spoken French; a continuation of FREA96H3. This course is designed for students who have some knowledge of French. It continues the basic, comprehensive training in both written and oral French begun in FREA96H3, using the second half of the same textbook. A placement test is mandatory for all students who register for the first time in FREA96H3, FREA97H3, FREA98H3 and FREA99H3. The Department strongly recommends that the placement test be completed prior to registration.
Prerequisite: FREA96H3 or (LGGA21H3)
Exclusion: (LGGA22H3), FSL102H or equivalent.
Enrolment Limits: 30 per section
Breadth Requirement: Arts, Literature & Language

FREA98H3 Intermediate French I
Intended for students who have studied some French in high school or have some knowledge of French. Offers a review of all basic grammar concepts and training in written and spoken French. Reinforces reading comprehension, written skills and oral/aural competence. A placement test is mandatory for all students who register in FREA96H3, FREA97H3, FREA98H3 or FREA99H3 for the first time. The Department strongly recommends that the placement test be completed prior to registration.
Prerequisite: FREA97H3 or (LGGA22H3)
Exclusion: FSL121Y, (LGGB23H3) or equivalent
Enrolment Limits: 30 per section
Breadth Requirement: Arts, Literature & Language

FREA99H3 Intermediate French II
Intended for students who have some knowledge of French and who wish to bring their proficiency up to the level of normal University entrance; a continuation of FREA98H3; prepares students for FREA01H3. Offers training in written and spoken French, reinforcing reading comprehension, written skills and oral/aural competence. A placement test is mandatory for all students who register in FREA96H3, FREA97H3, FREA98H3 or FREA99H3 for the first time. The Department strongly recommends that the placement test be completed prior to registration.
Prerequisite: FREA98H3, (LGGB23H3) or equivalent.
Exclusion: Grade 12 French, (LGGB24H3), FSL121Y or equivalent. Cannot be taken concurrently or after FREA01H3.
Enrolment Limits: 30 per section
Breadth Requirement: Arts, Literature & Language

FREA01H3 Language Practice I
Reinforcement and development of the language skills - understanding, reading, writing and speaking - necessary for higher-level courses. The course includes grammar review (written and oral), various exercises both traditional and internet-based, and reading and discussion of texts from different francophone cultures. FREA01H3 is a prerequisite for all B-level courses.
Prerequisite: Grade 12 French or FREA99H3 or equivalent
Exclusion: Native or near-native fluency in French, (FSL161Y), (FSL181Y), FSL221Y
Breadth Requirement: Arts, Literature & Language

FREA02H3 Language Practice II
A continuation of FREA01H3.
Prerequisite: FREA01H3
Exclusion: Native or near-native fluency in French; (FREA10Y3), (FSL161Y), (FSL181Y), FSL221Y
Breadth Requirement: Arts, Literature & Language

FREA17H3 Conversation I
Development and reinforcement of spoken French. Through oral practice based on common situations, students will learn vocabulary, syntax and grammar essential for communication. The course also involves supportive in-class written work and listening comprehension exercises. It may but does not have to accompany FREA01H3 and FREA02H3.
Prerequisite: Grade 12 French or equivalent
Exclusion: Native or near-native proficiency; (FSL161Y). In addition, FREA17H3 may not be taken after or concurrently with FREB01H3, FREB02H3, FREB17H3, FREC01H3, FREC02H3, FREC05H3, FREC06H3 or FREC18H3.
Breadth Requirement: Arts, Literature & Language

FREB01H3 Language Practice III
This course is concerned with the development of fluency, accuracy of expression and style through the study of grammar, composition, aural/oral practice and a variety of readings. Course work can be supplemented by audio and videotapes.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: (FSL261Y), (FSL281Y), FSL331Y, FSL341Y or equivalent or native proficiency
Breadth Requirement: Arts, Literature & Language

FREB02H3 Language Practice IV
A continuation of FREB01H3.
Prerequisite: FREB01H3
Exclusion: (FSL261Y), (FSL281Y), FSL331Y, FSL341Y or equivalent or native proficiency
Breadth Requirement: Arts, Literature & Language

FREB08H3 Practical Translation I
An introduction to translation. The course will use a wide selection of short texts dealing with a variety of topics. Grammatical and lexical problems will be examined with special attention to interference from English.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: Native proficiency. FREB08H3 may not be taken after or concurrently with FREC18H3, FRE480Y or FRE481Y.
Breadth Requirement: Arts, Literature & Language
FREB11H3 French Language in the School System
This course is intended for students considering a career in language teaching. It involves a series of seminars as well as preparation for observations in local schools throughout the duration of the course.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Breadth Requirement: Arts, Literature & Language

FREB17H3 Conversation II
Intensive practice in spoken French. Controlled situational work, discussion groups and a variety of exercises designed to improve lexical and syntactical resourcefulness will provide an opportunity for a reasonable degree of confidence when speaking about everyday life and contemporary topics.
FREB17H3 can also be taken under Study Elsewhere.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Breadth Requirement: Arts, Literature & Language

FREB18H3 Commercial French
The French language in a commercial or economic context. Of interest, among others, to students in French, Business, Accounting, Management, Economics and Journalism, this course emphasizes commercial writing techniques and exercises that include the vocabulary and structures of business language primarily as found in the Canadian francophone community.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FSL366H
Breadth Requirement: Arts, Literature & Language

FREB20H3 Teaching Children’s Literature in French
An analysis of the varied forms and contents of children’s literature written in French. The course examines different texts in terms of target age, pictorial illustrations, didactic literature written in French. The course examines different aspects such as history, literature, art, politics, education, popular culture and cinema will be examined. Emphasis will be placed on the elements of Québec culture and society that make it a distinct place in North America.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FRE385H
Breadth Requirement: Arts, Literature & Language

FREB22H3 The Society and Culture of Québec
A study of the historical, cultural and social development of Québec society from its origins to today. Aspects such as history, literature, art, politics, education, popular culture and cinema will be examined. Emphasis will be placed on the elements of Québec culture and society that make it a distinct place in North America.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FSL366H
Breadth Requirement: Arts, Literature & Language

FREB27H3 Modern France
An examination of political, social and cultural developments in France in the last hundred years. Topics will include: the impact of two World Wars; the decolonization process; the European Community; the media; the educational system; immigration etc.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FSL366H
Breadth Requirement: History, Philosophy & Cultural Studies

FREB28H3 The Francophone World
An examination of historical, political and cultural realities in different parts of the French-speaking world. Topics to be discussed will include slavery, colonization, de-colonization and multilingualism.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FSL362Y
Breadth Requirement: History, Philosophy & Cultural Studies

FREB35H3 Francophone Literature
A study of a variety of literary texts from the French-speaking world, excluding France and Canada. Attention will be given to the cultural and historical background as well as to the close study of works from areas including the West Indies, North and West Africa.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FRE332H
Breadth Requirement: Arts, Literature & Language

FREB36H3 The 20th Century Québec Novel
A study of some of the major novels written in Québec since 1945. The course will focus on the evolution of the novelistic form and its relevance within modern Western literature. We will also examine the link between the novels studied and the transformation of Québec society.
Prerequisite: FREA01H3 & FREA02H3
Exclusion: FRE210Y
Breadth Requirement: Arts, Literature & Language

FREB37H3 Contemporary Québec Drama
An examination of contemporary Québec theatre. We will study texts representative of a variety of dramatic styles. The focus will be primarily on dramatic texts; significant theatrical performances, however, will also be considered.
Prerequisite: FREA01H3 & FREA02H3
Exclusion: FRE312H
Breadth Requirement: Arts, Literature & Language

FREB43H3 Understanding French Grammar
Directed to students specializing in French and all those who wish to strengthen their knowledge/use of French.
We explore ways in which quite simplified linguistic tools shed light on the apparent complexity of French grammar, and examine parts of speech, grammatical features and functions, subordination, clause types, and more.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FRE272Y, FREC01H3/FREC02H3 or equivalent, native proficiency
Breadth Requirement: Arts, Literature & Language

FREB44H3 Introduction to Linguistics: French Phonetics and Phonology
An examination of the sound system of modern French. The course will acquaint student with acoustic phonetics and the basic concept and features of the French phonetic system. Phonological interpretation of phonetic data (from speech samples) and prosodic features such as stress and intonation will be examined.
Prerequisite: [FREA01H3 & FREA02H3] or equivalent
Exclusion: FRE272Y, FRE376H
Breadth Requirement: Arts, Literature & Language

FREB45H3 Introduction to Linguistics: French Morphology and Syntax
An examination of the internal structure of words and sentences in French.
Covered are topics including word formation, grammatical categories, syntactic structure of simple and complex clauses, and grammatical relations of subject, predicate and complement.

This course complements FREQ43H3 and FREG44H3.

Prerequisite: [FREQA01H3 & FREQA02H3]

Exclusion: FRE272Y

Breadth Requirement: Arts, Literature & Language

FREQ50H3 Introduction to Literature in French I

A study of representative texts from the three major literary genres (fiction, drama, poetry). The course will introduce students to the critical reading of literary texts in French; students will acquire the basic concepts and techniques needed to analyze literature.

Prerequisite: [FREQA01H3 & FREQA02H3] or equivalent

Exclusion: FRE250Y

Breadth Requirement: Arts, Literature & Language

FREQ51H3 Literary History in Context: From the Middle Ages to the 17th Century

A study of the evolution of the major trends of French literature from the Middle Ages to the 17th century through representative texts (short novels, poetry and short stories) selected for their historical relevance and literary importance.

Prerequisite: [FREQA01H3 & FREQA02H3] or equivalent

Exclusion: FRE250Y

Breadth Requirement: Arts, Literature & Language

FREQ55H3 Literary History in Context: 18th and 19th Centuries

A study of the evolution of the major trends of French literature from the 18th and 19th centuries through representative texts (short stories, poetry and novels), selected for their historical relevance and literary importance. Students will also learn to use some tools required for text analysis and will apply them in context.

Prerequisite: [FREQA01H3 & FREQA02H3] or equivalent

Exclusion: FRE250Y

Breadth Requirement: Arts, Literature & Language

FREC11H3 Teaching French as a Second Language

A study of different theories of language teaching and learning and their application to the teaching of French as a second language.

Prerequisite: [FREC01H3 & FREC02H3] or equivalent

Exclusion: FRE384H

Breadth Requirement: Arts, Literature & Language

FREC01H3 Language Practice V

The purpose of the course is to improve the student's written, listening and oral skills. The course will focus on acquisition of the appropriate means of expression through practice in text summary, composition, error analysis, review of specific grammar points and discussion of recorded material, articles and films.

Prerequisite: [FREG01H3 & FREG02H3] or equivalent

Exclusion: (FSL361Y), (FSL382H), (FSL383H), FSL431Y, FSL442H, FSL443H or equivalent

Breadth Requirement: Arts, Literature & Language

FREC02H3 Language Practice VI

A continuation of FREC01H3.

Prerequisite: FREC01H3

Exclusion: (FSL361Y), (FSL382H), (FSL383H), FSL431Y, FSL442H, FSL443H or equivalent

Breadth Requirement: Arts, Literature & Language

FREC05H3 Exercise in Interpreting

Preparation for using oral French for job and other contact-related purposes. The class features small groups in "real-life" situations (e.g. legal cases, social work, immigration, annual business meetings). Practice in interpreting will focus on retention, accuracy of expression, lexical resourcefulness, cultural "reformatting" and speed of delivery.

Prerequisite: FREB17H3 or equivalent

Breadth Requirement: Arts, Literature & Language

FREC12H3 Semantics: The Study of Meaning

An introduction to the role of meaning in the structure, function, and use of language. Approaches to the notion of meaning as applied to English and French data will be examined.

Same as LINC12H3. Taught in English.

Prerequisite: LINA01H3 or [FREB44H3 and FREB45H3]

Exclusion: LINC12H3, FRE386H, LIN341H, (FREC49H3) (FRED49H3)

Breadth Requirement: History, Philosophy & Cultural Studies

FREC18H3 Translation for Business and Professional Needs

Practice in translating commercial, professional and technical texts. Students will have the opportunity to widen their knowledge of the vocabulary and structures particular to the language of business as well as to such fields as industrial relations, insurance, software, health care, social work and finance.

Prerequisite: [FREG01H3 & FREG02H3] & [FREG08H3 or (FREG09H3)] or equivalent

Exclusion: FREC18H3 may not be taken after or concurrently with FRE480Y or FRE481Y.

Breadth Requirement: Arts, Literature & Language
FREC38H3 Special Topics in the Literature of Québec: Postmodern Literature  
An exploration of the textual forms and ideas that challenge tradition in contemporary writing. Québécois postmodern literature speaks of vitality, liberating forces and creativity. We will examine issues such as gender identity, the question of the Self and the Other and the impact of technology on our culture.  
Prerequisite: FREB50H3 or equivalent  
Breadth Requirement: Arts, Literature & Language

FREC45H3 Morphology  
Core issues in morphological theory, including properties of the lexicon and combinatorial principles governing word formation as they apply to French and English words. Same as LINC05H3. Taught in English.  
Prerequisite: FREB45H3 or LINB06H3  
Exclusion: FRED06H3, LIN231H, (LINB05H3), LINC05H3, LIN333H  
Breadth Requirement: Arts, Literature & Language

FREC46H3 Syntax II  
Core issues in syntactic theory, with emphasis on universal principles and syntactic variation between French and English.  
Same as LINC11H3. Taught in English.  
Prerequisite: FREB45H3 or LINB06H3  
Exclusion: FRED06H3, LIN231H, LIN331H, LINC11H3  
Breadth Requirement: Arts, Literature & Language

FREC47H3 Special Topics in Linguistics: Pidgin and Creole Languages  
A study of pidgin and Creole languages worldwide. The course will introduce students to the often complex grammars of these languages and examine French, English, Spanish and Dutch-based Creoles, as well as regional varieties. It will include some socio-historical discussion. Same as LINC47H3. Taught in English.  
Prerequisite: [LINA01H3 and LINA02H3] or [FREB44H3 and FREB45H3]  
Exclusion: LINC47H3  
Breadth Requirement: Arts, Literature & Language

FREC48H3 Sociolinguistics of French  
An exploration of the relationship between language and society within a francophone context. We examine how language use is influenced by social factors. Topics include dialect, languages in contact, language shift, social codes and pidgin and Creole languages. Fieldwork is an integral part of this course.  
Prerequisite: [FREB01H3 & FREB02H3] or equivalent  
Exclusion: LINB20H3, (LINB21H3)  
Breadth Requirement: Social & Behavioural Sciences

FREC56H3 Topics in French Literature: Short Stories of the 19th and 20th Centuries  
A study of the genre illustrated by short stories from different periods and traditions. The course will examine themes and literary techniques in at least six short stories; attention will also be paid to their socio-cultural context.  
Prerequisite: [FREB01H3 & FREB02H3] & [FREB50H3 or equivalent]  
Breadth Requirement: Arts, Literature & Language

FREC61H3 Topics in French Literature: Humour in French-Language Fiction Today  
An examination of modern and contemporary comic writing in French. The bases and functions of literary humour in the last several decades will be studied in works by authors both French and francophone as we consider culture's influence and how and why satire, parody and pastiche make us laugh.  
Prerequisite: FREB50H3 or equivalent  
Breadth Requirement: Arts, Literature & Language

FREC63H3 Topics in French Literature: Encountering Foreign Cultures: Travel Writing in French  
An examination of the trends and attitudes embodied in French travel writing over time. The course considers aspects of utopianism, cosmopolitanism, exoticism, imperialism, postcolonialism and ethnography in fictional and non-fictional narratives set 'elsewhere'. Selections are drawn from writers such as Lahontan, Gautier, Nerval, Gide, Loti, Segalen, Camus, Bouvier and Baudrillard.  
Prerequisite: [(FREB01H3 & FREB02H3) & (FREB50H3 or equivalent)]  
Exclusion: none  
Breadth Requirement: Arts, Literature & Language

FREC68H3 Cultural Identities and Stereotypes in the French-Speaking World  
The history and development of perceptions of "us" and "them" in France and the francophone world. The course examines language and culture, and the historic role of Eurocentrism and colonialism in the construction of cultural stereotypes. "Others" considered include the "noble savage", the "Oriental", the "country bumpkin" and the "foreigner". This course was formerly taught in English, but will now be taught in French.  
Prerequisite: [FREB01H3 & FREB02H3] or equivalent, and one of FREB22H3, FREB27H3 and FREB28H3 or equivalent.  
Breadth Requirement: History, Philosophy & Cultural Studies

FRED01H3 Language Practice VII: Written French  
Through a review of major grammar points and the development of the necessary techniques for the production of various types of discourse (argumentative essays, summarizing, critiquing, etc.), students will be guided to work on accuracy and logical structure in written French.  
Prerequisite: FREC02H3 or equivalent  
Exclusion: FSL431Y, FSL461Y, FSL442H or equivalent  
Enrolment Limits: 30  
Breadth Requirement: Arts, Literature & Language

FRED06H3 Language Practice VIII: Oral French  
An advanced language course designed for students who want to consolidate their oral/aural skills. In-class discussions, debates and oral presentations will enhance their fluency, expand their vocabulary and improve their pronunciation. FRED06H3 is offered as a service-learning course.  
Prerequisite: FREC02H3 or equivalent  
Exclusion: FSL443H or equivalent  
Enrolment Limits: 30  
Breadth Requirement: Arts, Literature & Language
FRED12H3 Advanced Topics in Literature: Haitian Migrant Literature in Québec
Novels by Haitian writers living in Québec speak of migration, tension, marginalization, in-betweenness, belonging, the Self and the Other. This course will explore these issues through 4 novels and several other texts, all of which question our societies and encourage change.
Prerequisite: [FREB50H3 & at least one C-level literature course]

FRED46H3 Field Methods in Linguistics
Practice in language analysis based on elicited data from second language learners and foreign language speakers. Emphasis is put on procedures and techniques of data collection, as well as theoretical implications arising from data analysis.
Same as LIND46H3. Taught in English.
Prerequisite: [FREB44H3 and FREC46H3] or [LINC02H3 and LINC11H3]
Exclusion: JAL401H, LIND46H3
Breadth Category: Arts, Literature & Language

FRED90Y3 Supervised Reading
These courses offer the student an opportunity to carry out independent study of an advanced and intensive kind, under the direction of a faculty member. Student and instructor work out in consultation the course's objectives, content, bibliography, and methods of approach. The material studied should bear a clear relation to the student's previous work, and should differ significantly in content and/or concentration from topics offered in regular courses. In applying to a faculty supervisor, students should be prepared to present a brief written statement of the topic they wish to explore. Final approval of the project rests with the French Discipline Students are advised that they must obtain consent from the supervising instructor before registering for these courses. Interested students should contact the Discipline Representative or Program Supervisor for guidance.
Prerequisite: One B-level course in the group FREB01H3-FREB84H3, except FREB17H3 & FREB18H3.

Geography

Faculty List
E.C. Relph, B.A., M.Phil. (London), Ph.D. (Toronto), Professor Emeritus
M. F. Bunce, B.A. (Sheffield), Ph.D. (Sheffield), Associate Professor Emeritus
J. R. Miron, B.A. (Queen's), M.A. (Penn.), M.Sc. (pl.), Ph.D. (Toronto), Professor
M. Hunter, B.A. (Sussex), M.A. (Univ. of Natal), Ph.D. (Univ. California, Berkeley), Associate Professor
T. Kepe, B. Agric. (Fort Hare), M.Sc. (Guelph), Ph.D. (Western Cape), Associate Professor
M. Mahtani, B.A. (Dalhousie), Ph.D. (London), Associate Professor
A. Sorensen, B.F.A. (Nova Scotia College of Art and Design), M.Sc., Ph.D. (London), Associate Professor
S.C. Bunce, B.A. (Guelph), M.E.S. Pl. (York), Ph.D. (York), Assistant Professor
J. Han, B.A., Ph.D. (Univ. California Berkeley), Assistant Professor
K. MacDonald, B.A., M.A., Ph.D. (Waterloo), Assistant Professor
R. Narayanaraddy, M.E.S. (Yale University), Ph.D. (Minnesota), Assistant Professor

Discipline Representative: A. Sorensen

Undergraduate Counsellor: J. Roopnarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

Geography is a broad-ranging subject. As a social science it is concerned with the spatial patterns of human activity and the
character of regions and places. It is a subject which is well placed to explore the complex relationships between society and the
natural environment as well as the social and economic problems of human land use and settlement. It therefore complements other
Programs such as: City Studies, Environmental Science, Political Science, Sociology, Anthropology, Economics for Management
Studies and Development Studies. Geography courses are also listed as options in several U of T Scarborough Programs including the
Co-op Program in International Development.

MAJOR PROGRAM IN HUMAN GEOGRAPHY (ARTS)
A Major Program for students interested in Human Geography as an academic discipline. This Program equips students with the
knowledge and skills needed to understand contemporary social science thought in the context of the communities, societies, and
economies formed by human populations, and the ways in which location, landscape, and spatial context shape (and are shaped by)
social structures, functioning, and behaviour.

Guidelines for 1st year course selection
Students intending to complete the Major Program in Human Geography are required to take GGRA02H3, and are advised to take
one of GGRA03H3 and GGRA30H3 in first year.

Guidelines for Major Program completion:
Courses in the Major Program in Human Geography are divided into three main subdisciplinary concentrations: Urban Geography,
Social/Cultural Geography and Environmental Geography. Major students are welcome to take courses in more than one area of
concentration and are advised to take all three of the related Theory and Concepts courses, GGRB05H3 Urban Geography,
GGRB13H3 Social Geography, and GGRB21H3 Environments and Environmentalisms. Courses marked with an asterisk (*) are
foundational courses. Courses described as foundational cover core concepts in the discipline and are considered essential prerequisites for upper level courses. You should take these in your first or second year of study. Human Geography Major students are advised to focus after second year in one of the three following concentration: Urban, Social/Cultural, and Environmental.

**URBAN Geography Concentration**
- GGRA03H3 Cities and Environments
- GGRB05H3 Urban Geography
- GGRC04H3 Urban Residential Geography
- GGRC10H3 Urbanization and Development
- GGRC11H3 Current Topics in Urban Geography
- GGRC13H3 Urban Political Geography
- GGRC27H3 Location and Spatial Development
- GGRC33H3 The Toronto Region
- GGRC40H3 Megacities and Global Urbanization
- GGRC45H3 Local Geographies and Globalization
- GGRC48H3 Geographies of Urban Poverty
- GGRD25H3 Research Seminar in Urban Spaces

**SOCIAL/CULTURAL Geography Concentration**
- GGRA02H3 The Geography of Global Processes
- GGRB13H3 Social Geography
- GGRB28H3 Geographies of Disease
- GGRB55H3 Geographies of Religion and Secularism
- GGRC02H3 Population Geography
- GGRC04H3 Urban Residential Geography
- GGRC09H3 Current Topics in Social Geography
- GGRC24H3 Socio-Natures and the Cultural Politics of „The Environment”
- GGRC31H3 Qualitative Geographical Methods: Place and Ethnography
- GGRC45H3 Local Geographies of Globalization
- GGRC56H3 Spaces of Travel: Unsettling Migration, Tourism, and Everyday Mobilities
- GGRD09H3 Feminist Geographies
- GGRD10H3 Health and Sexuality
- GGRD19H3 Spaces of Multiraciality: Critical Mixed Race Theory

**ENVIRONMENTAL Geography Concentration**
- GGRA02H3 The Geography of Global Processes
- GGRA03H3 Cities and Environments
- GGRB21H3 Environments and Environmentalisms
- GGRC21H3 Current Topics in Environmental Geography
- GGRC22H3 Political Ecology Theory and Applications
- GGRC24H3 Socio-Natures and the Cultural Politics of „The Environment”
- GGRC25H3 Land Reform and Development
- GGRC26H3 Geographies of Environmental Governance
- GGRC28H3 Indigenous Environmental Knowledges
- GGRC29H3 Agriculture, Environment, and Development
- GGRC44H3 Environmental Conservation and Sustainable Development
- GGRD08H3 Research Seminar in Environmental Geography

**Program Requirements**
The Major Program in Human Geography requires a total of 7.0 full credits as follows:

1. **Theory and Concepts in Human Geography**
   - *GGRA02H3 The Geography of Global Processes*
   - *GGRB02H3 The Logic of Geographical Thought*
   - and
   - 1.5 credits from:
     - *GGRB05H3 Urban Geography*
     - *GGRB13H3 Social Geography*
     - *GGRB21H3 Environments and Environmentalisms*
     - *GGRB28H3 Geographies of Disease*
     - *GGRC55H3 Geographies of Religion and Secularism*
2. **Methods** (1.0 credit)
   GGRA30H3 Geographic Information Systems (GIS) and Empirical Reasoning
   and one of:
   GGRB30H3 Socio-Spatial Analysis (Intermediate GIS)
   GGRC31H3 Qualitative Geographical Methods: Place and Ethnography
   ANTC35H3 Quantitative Methods in Anthropology
   ECMB11H3 Quantitative Methods in Economics I
   GGR270H Introductory Analytical Methods
   GGR271H Social Research Methods
   PSYB07H3 Data Analysis in Psychology
   SOCB06H3 Social Statistics
   STAB22H3 Statistics I

3. **Applications** (at least 2.0 credits from among the following):
   GGRC01H3 Supervised Readings in Human Geography
   GGRC02H3 Population Geography
   GGRC04H3 Urban Residential Geography
   GGRC09H3 Current Topics in Social Geography
   GGRC10H3 Urbanization and Development
   GGRC11H3 Current Topics in Urban Geography
   GGRC13H3 Urban Political Geography
   GGRC21H3 Current Topics in Environmental Geography
   GGRC22H3 Political Ecology Theory and Applications
   GGRC24H3 Socio-Natures and the Cultural Politics of „The Environment”
   GGRC25H3 Land Reform and Development
   GGRC26H3 Geographies of Environmental Governance
   GGRC27H3 Location and Spatial Development
   GGRC28H3 Indigenous Environmental Knowledges
   GGRC29H3 Agriculture, Environment, and Development
   GGRC33H3 The Toronto Region
   GGRC40H3 Megacities and Global Urbanization
   GGRC41H3 Current Topics in Human Geography
   GGRC44H3 Environmental Conservation and Sustainable Development
   GGRC45H3 Local Geographies of Globalization
   GGRC48H3 Geographies of Urban Poverty
   GGRC56H3 Spaces of Travel: Unsettling Migration, Tourism, and Everyday Mobilities.
   GGRD01H3 Supervised Research Project
   GGRD08H3 Research Seminar in Environmental Geography
   GGRD09H3 Feminist Geographies
   GGRD10H3 Health and Sexuality
   GGRD11H3 Advanced Geographical Theory and Methods
   GGRD19H3 Spaces of Multiraciality: Critical Mixed Race Theory
   GGRD25H3 Research Seminar in Urban Spaces

4. 1.5 additional credits to be selected from GGRA03H3, and the courses listed in Requirements 1 and 3 above.

**MINOR PROGRAM IN HUMAN GEOGRAPHY (ARTS)**
**Program Requirements**
The requirements for this Program are 4.0 full credits in Geography which must include 1.0 full credit at the C-level or D-level.

**MAJOR PROGRAM IN PHYSICAL AND HUMAN GEOGRAPHY (ARTS)**
This is an interdepartmental program leading to a B.A. degree in which students combine courses in human geography (GGR prefix) with courses in physical geography (EES prefix).

**Guidelines for 1st year course selection**
EES courses presume a background in physical sciences and mathematics. It is recommended that first year students take EESA01H3, EESA06H3, GGRA02H3 and GGRA03H3 and at least 1.0 full credit from among [BIOA01H3 & BIOA02H3], [CHMA10H3 & CHMA11H3], [PHYA10H3 or PHYA11H3], [MATA30H3 & MATA35H3/A36H3/A37H3].

**Program Requirements**
The Major Program in Physical and Human Geography requires the completion of a total of 8.0 full credits of which 4.0 credits are to be EES courses, and 4.0 credits are to be GGR courses. Among these 8.0 credits, the student must include:
1. EESA01H3, EESA06H3, GGRA02H3 & GGRA03H3
2. At least 1.5 credits from among EESB02H3, EESB03H3, EESB04H3, EESB05H3, & EESB15H3
3. At least 1.5 credits from among [CITB01H3 or (GGRB06H3)], GGRB05H3, CITC03H3, GGRB13H3, GGRB28H3 & GGRC44H3
4. At least 1.0 credit at the C- or D-level from among EES courses
5. At least 1.0 credit at the C- or D-level from among GGR courses
6. At least one additional 0.5 credit with a GGR prefix
7. At least one additional 0.5 credit with an EES prefix

GGRA02H3  The Geography of Global Processes
Globalization from the perspective of human geography. The course examines how the economic, social, political, and environmental changes that flow from the increasingly global scale of human activities affect spatial patterns and relationships, the character of regions and places, and the quality of life of those who live in them. Exclusion: GGR107H, (GGR107Y), GGR117Y

GGRA03H3  Cities and Environments
An introduction to the characteristics of modern cities and environmental issues, and their interconnections. Linkages between local and global processes are emphasized. Major topics include urban forms and systems, population change, the complexity of environmental issues such as climate change and water scarcity, planning for sustainable cities. Exclusion: GGR107H, (GGR107Y), GGR117Y

GGRA30H3  Geographic Information Systems (GIS) and Empirical Reasoning
Confirmatory causal modeling and GIS; map as model; GIS data input; cartographic and GIS data structures; data errors and editing; elementary spatial analysis; measurement; map comparison; classification; statistical surfaces; spatial arrangement; privacy issues. Exclusion: (EESA08H3), GGR272H. GGRA30H3 may not be taken after or concurrently with EESC03H3.

GGRA31H3  Social Geography
The reciprocal relations between spatial structures and social identities. The course examines the role of social divisions such as class, 'race'/ethnicity, gender and sexuality in shaping the social geographies of cities and regions. Particular emphasis is placed on space as an arena for the construction of social relations and divisions. Prerequisite: Any 4 credits

GGRB21H3  Environments and Environmentalisms
This foundational course explores different conceptions of „the environment” as they have changed through space and time. It also analyzes the emergence of different variants of environmentalism and their contemporary role in shaping environmental policy and practice. Exclusion: ENV221H, ENV222H, GGR222H, JGE321H

GGRA04H3  Geographies of Religion and Secularism
Examines religious movements, faith based practices, and secularism with an emphasis on transnational flows and contentious sites. Includes discussion of immigrant and transnational community formations, faith-based welfare and class formation, fundamentalisms and social movements, conflict and violence, and debates concerning gender and sexuality. Prerequisite: 1.0 credits at the A-level in Geography, Sociology or Anthropology

GGRA30H3 Socio-Spatial Analysis (Intermediate GIS)
Following on GGRA30H3, this course teaches intermediate GIS (e.g. generalization, spatial intelligence, and visualization) and spatial analysis methods (e.g. K-functions, Markov chains, redistricting and location-allocation, simulation, and spatial patterns for points and lines) with a focus on the use and interpretation of census data. Prerequisite: GGRA30H3

GGRA31H3  Social Geography
The reciprocal relations between spatial structures and social identities. The course examines the role of social divisions such as class, 'race'/ethnicity, gender and sexuality in shaping the social geographies of cities and regions. Particular emphasis is placed on space as an arena for the construction of social relations and divisions. Prerequisite: Any 4 credits

GGRB28H3  Geographies of Disease
Examines the geographical distribution of disease and the spatial processes in which diseases are embedded. Themes include spatial theories of health and disease and uneven development and health. Special attention will be given to the geographical dimension of the HIV pandemic. Prerequisite: Any 4 credits

GGRB28H3  Geographies of Disease
Examines the geographical distribution of disease and the spatial processes in which diseases are embedded. Themes include spatial theories of health and disease and uneven development and health. Special attention will be given to the geographical dimension of the HIV pandemic. Prerequisite: Any 4 credits

GGRB28H3  Geographies of Religion and Secularism
Examines religious movements, faith based practices, and secularism with an emphasis on transnational flows and contentious sites. Includes discussion of immigrant and transnational community formations, faith-based welfare and class formation, fundamentalisms and social movements, conflict and violence, and debates concerning gender and sexuality. Prerequisite: 1.0 credits at the A-level in Geography, Sociology or Anthropology

GGRB30H3 Socio-Spatial Analysis (Intermediate GIS)
Following on GGRA30H3, this course teaches intermediate GIS (e.g. generalization, spatial intelligence, and visualization) and spatial analysis methods (e.g. K-functions, Markov chains, redistricting and location-allocation, simulation, and spatial patterns for points and lines) with a focus on the use and interpretation of census data. Prerequisite: GGRA30H3

GGRA31H3  Social Geography
The reciprocal relations between spatial structures and social identities. The course examines the role of social divisions such as class, 'race'/ethnicity, gender and sexuality in shaping the social geographies of cities and regions. Particular emphasis is placed on space as an arena for the construction of social relations and divisions. Prerequisite: Any 4 credits

GGRB28H3  Geographies of Religion and Secularism
Examines religious movements, faith based practices, and secularism with an emphasis on transnational flows and contentious sites. Includes discussion of immigrant and transnational community formations, faith-based welfare and class formation, fundamentalisms and social movements, conflict and violence, and debates concerning gender and sexuality. Prerequisite: 1.0 credits at the A-level in Geography, Sociology or Anthropology

GGRB55H3  Geographies of Religion and Secularism
Examines religious movements, faith based practices, and secularism with an emphasis on transnational flows and contentious sites. Includes discussion of immigrant and transnational community formations, faith-based welfare and class formation, fundamentalisms and social movements, conflict and violence, and debates concerning gender and sexuality. Prerequisite: 1.0 credits at the A-level in Geography, Sociology or Anthropology
GGRCo1H3 Supervised Readings in Human Geography
An independent supervised reading course open only to students in the Major Program in Human Geography. An independent literature review research project will be carried out under the supervision of an individual faculty member. Prerequisite: 10 full credits including completion of the following requirements for the Major Program in Human Geography: 1) Introduction, 2) Theory and Concepts, 3) Methods; & a cumulative GPA of at least 2.5.

GGRCo2H3 Population Geography
An examination of the geographical dimension to human population through the social dynamics of fertility, mortality and migration. Themes include disease epidemics, international migration, reproductive technologies, and changing family structure. Prerequisite: STAB22H3 & [GGRB02H3 & HLTB01H3] Exclusion: GGR323H Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo4H3 Urban Residential Geography
Household production; household governance and contracting; household economic behaviour, housing demand, life course and housing career; housing policy and markets; dwelling maintenance and neighbourhood; social mix and segregation. Prerequisite: STAB22H3 & [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3] Exclusion: GGR357H Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo9H3 Current Topics in Social Geography
Examination and discussion of current trends and issues in social geography, with particular emphasis on recent developments in concepts and methods. Specific content will vary from year to year. Prerequisite: GGRB02H3 & GGRB13H3 Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo10H3 Urbanization and Development
Examines global urbanization processes and the associated transformation of governance, social, economic, and environmental structures particularly in the global south. Themes include theories of development, migration, transnational flows, socio-spatial polarization, postcolonial geographies of urbanization. Prerequisite: [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo11H3 Current Topics in Urban Geography
Examination and discussion of current trends and issues in urban geography, with particular emphasis on recent developments in concepts and methods. Specific content will vary from year to year. Prerequisite: [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo13H3 Urban Political Geography
Geographical approach to the politics of contemporary cities with emphasis on theories and structures of urban political processes and practices. Includes nature of local government, political powers of the property industry, big business and community organizations and how these shape the geography of cities. Prerequisite: [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo21H3 Current Topics in Environmental Geography
Examination and discussion of current trends and issues in environmental geography, with particular emphasis on recent developments in concepts and methods. Specific content will vary from year to year. Prerequisite: GGRB02H3 & GGRB21H3, (GGRB20H3) Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo22H3 Political Ecology Theory and Applications
Explores how politics, the economy, history and culture shape, and are shaped by interactions of people with the physical environment. Analysis moves beyond the roles government and interest groups in shaping environmental policies, to expanding our understanding of 'politics' in (i) environmental discourses and knowledge; (ii) economic systems; (iii) regimes of natural resource ownership and use; and (iv) everyday struggles within and between communities and interest groups as they shape human-nature relationships. Prerequisite: (GGRB20H3) & [GGRB02H3 or IDSB02H3] & GGRB21H3 Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo24H3 Socio-Natures and the Cultural Politics of 'The Environment'
Explores the processes through which segments of societies come to understand their natural surroundings, the social relations that produce those understandings, popular representations of nature, and how „the environment“ serves as a consistent basis of social struggle and contestation. Prerequisite: GGRA02H3 or GGRB13H3 Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRCo25H3 Land Reform and Development
Land reform, which entails the redistribution of private and public lands, is broadly associated with struggles for social justice. It embraces issues concerning how land is transferred (through forceful dispossession, law, or markets), and how it is currently held. Land inequalities exist all over the world, but they are more pronounced in the developing world, especially in countries that were affected by colonialism. Land issues, including land reform, affect most development issues. Prerequisite: GGRB02H3 & [(GGRB13H3 & (GGRB20H3)) & GGRB21H3 or [IDSB01H3 & IDSB02H3]] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
GGRC26H3 Geographies of Environmental Governance

This course addresses the translation of environmentalism into formalized processes of environmental governance; and examines the development of environmental institutions at different scales, the integration of different forms of environmental governance, and the ways in which processes of governance relate to forms of environmental practice and management.
Prerequisite: GGRA02H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC27H3 Location and Spatial Development

Location of a firm; market formation and areas; agricultural location; urban spatial equilibrium; trade and spatial equilibrium; locational competition; equilibrium for an industry; trade and location.
Prerequisite: ECMA01H3 & [(GGRB02H3 & GGRB05H3) or (CITB01H3 & CITB02H3) or [(EUCMB01H3 or ECMB02H3) & (EUCMB05H3 or ECMB06H3)]
Exclusion: (GGRB27H3), GGR220Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC28H3 Indigenous Environmental Knowledges

Examines knowledge theory and Indigenous worldviews, environmental philosophies and values, and their relations to practice. Students will be introduced to Indigenous Knowledge as it pertains to the environment through exposure to community people, political leaders, academics, activists, and scholars.
Prerequisite: GGRA02H3 or GGRB13H3
Exclusion: ABS402H, GGR321H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC29H3 Agriculture, Environment and Development

Changing social, economic and environmental relations of agriculture in the late twentieth century. Includes expansion of global agribusiness, how this has affected conditions of agriculture at the farm and regional level and problems of achieving sustainable agriculture and food systems in an international development context.
Prerequisite: GGRB02H3 & [One of ANTB64H3, (ANTC63H3) or (ANTC64H3), IDSB01H3, IDSB02H3, GGRB20H3, GGRB21H3] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC31H3 Qualitative Geographical Methods: Place and Ethnography

Explores the practice of ethnography (i.e. participant observation) within and outside the discipline of geography and situates this within current debates on methods and theory. Topics include: the history of ethnography, ethnography within geography, current debates within geography, the “field,” and ethnography and “development.”
Prerequisite: 1.5 credits at the B-level in Geography
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC33H3 The Toronto Region

This course examines issues of urban form and structure, urban growth and planning in the Toronto region. Current trends in population, housing, economy, environment, governance, transport, urban design and planning practices at the local level and the regional scale will be examined critically.
Prerequisite: [GGRB02H3 & GGRB05H3] & [CITB01H3 or (GGRB06H3)]
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC40H3 Megacities and Global Urbanization

The last 50 years have seen dramatic growth in the global share of population living in megacities over 10 million population, with most growth in the global south. Such giant cities present distinctive infrastructure, health, water supply, and governance challenges, which are increasingly central to global urban policy and health.
Same as CITC40H3
Prerequisite: [GGRB02H3 & GGRB05H3] or [CITB01H3 & CITB02H3]
Exclusion: CITC40H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC41H3 Current Topics in Human Geography

Examination and discussion of current trends and issues in human geography, with particular emphasis on recent developments in concepts and methods. Specific content will vary from year to year. Seminar format with active student participation.
Prerequisite: GGRA02H3 & GGRA03H3 & GGRB02H3 & GGRB05H3 & [One of ANTB64H3, (ANTC63H3) or (ANTC64H3), IDSB01H3, IDSB02H3, GGRB20H3, GGRB21H3] Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

GGRC44H3 Environmental Conservation and Sustainable Development

Deals with two main topics: the origins of environmental problems in the global spread of industrial capitalism, and environmental conservation and policies. Themes include: changes in human-environment relations, trends in environmental problems, the rise of environmental awareness and activism, environmental policy, problems of sustainable development.
Prerequisite: Any 4 credits
Exclusion: GGR233Y and (GGRB20H3)
Enrolment Limit: 150
Breadth Requirement: Social & Behavioural Sciences

GGRC45H3 Local Geographies of Globalization

Examines the localized consequences of global processes. Toronto will be used as a site for understanding how individuals interact with and experience the effects of globalizing forces differently based on their unique conditions of life and how they respond to the challenges and opportunities of a globalized world.
Prerequisite: GGRB02H3 & [GGRB05H3 or (GGRB20H3) or GGRB21H3 or ANTB16H3 or IDSB01H3]
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
GGRC48H3 Geographies of Urban Poverty

How have social and economic conditions deteriorated for many urban citizens? Is the geographic gap widening between the rich and the poor? This course will explore the following themes: racialization of poverty, employment and poverty, poverty and gender socio-spatial polarization, and housing and homelessness.
Prerequisite: [GGRB02H3 and GGRB05H3] or [CITB01H3 and CITB02H3]
Recommended Preparation: 1.0 credits at the B-level in either Human Geography or City Studies
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRD09H3 Feminist Geographies

How do gender relations shape different spaces? We will explore how feminist geographers have approached these questions from a variety of scales - from the home, to the body, to the classroom, to the city, to the nation, drawing on the work of feminist geographers.
Prerequisite: GGRB02H3 & [[GGRB13H3 & GGRC13H3] or WSTC20H3]
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

GGRD10H3 Health and Sexuality

Examines links between health and human sexuality. Particularly explores sexually transmitted infections. Attention will be given to the socially and therefore spatially constructed nature of sexuality. Other themes include sexual violence, masculinities and health, reproductive health, and transnational relationships and health. Examples will be taken from a variety of countries.
Prerequisite: GGRB02H3 & [GGRB13H3 or GGRB28H3] & [[GGRC02H3 or GGRD19H3] or [HLTC02H3 & ANTC15H3]]
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

GGRD01H3 Supervised Research Project

An independent studies course open only to students in the Major Program in Human Geography. An independent studies project will be carried out under the supervision of an individual faculty member.
Prerequisite: 15 full credits including completion of the following requirements for the Major Program in Human Geography: 1) Introduction, 2) Theory and Concepts, 3) Methods; & a cumulative GPA of at least 2.5.
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

GGRD08H3 Research Seminar in Environmental Geography

Designed for final-year Human Geography Majors, this reading-intensive seminar course develops analytical and methodological skills in socio-spatial analysis. We explore major theoretical/methodological traditions in geography including positivism, humanism, Marxism, and feminism, and major analytical categories such as place, scale, and networks. Particularly recommended for students intending to apply to graduate school.
Prerequisite: 15 full credits including completion of the following requirements for the Major Program in Human Geography: 1) Introduction, 2) Theory and Concepts, 3) Methods. Priority will be given to Geography Majors with the highest GPA.
Enrolment Limits: 25. Restricted to Human Geography Major students.
Breadth Requirement: Social & Behavioural Sciences

GGRD12H3 Seminar in Selected Topics in Human Geography

Designed for final-year Human Geography Majors, this seminar is devoted to analysis and discussion of current theoretical and methodological issues in human geography. Specific content will vary from year to year. Seminar format with active student participation.
Prerequisite: 15 full credits including completion of the following requirements for the Major Program in Human Geography: 1) Introduction, 2) Theory and Concepts, 3) Methods. Priority will be given to Geography Majors with the highest GPA.
Enrolment Limits: 25. Restricted to Human Geography Major students.
GGRD25H3 Research Seminar in Urban Spaces
Designed for final-year Human Geography Majors, this seminar is devoted to analysis and discussion of current theoretical and methodological issues in urban geography. Specific content will vary from year to year. Seminar format with active student participation.
Prerequisite: 15.0 credits, including completion of the following requirements from the Major Program in Geography: 1) Introduction, 2) Theory and Concepts, 3) Methods. Priority will be given to Geography Majors with the highest CGPA.
Enrolment Limit: 25
Breadth Requirement: Social & Behavioural Sciences

Global Asia Studies

Faculty List
P-c. Hsiung, B.A. (National Chun-sing), M.A. (Chinese Cultural), M.A., Ph.D. (UCLA), Associate Professor
R. Bai, B.A., M.A. (Beijing Foreign Studies), Ph.D. (Illinois), Assistant Professor
L. Chen, B.A. (Beijing Foreign Studies), M.A. (SUNY Buffalo), J.D.(Illinois), M.A., M.Ph. (Columbia), Assistant Professor
J. Park, B.A., M.A. (Sookmyung Women’s), M.S., Ph.D. (Illinois), Assistant Professor
J. Sharma, B.A. (Lady Shri Ram), M.A. (Hindu), M.Phil. (Delhi), Ph.D. (Cantab), Assistant Professor
H.X. Wu, M.A., Ph.D. (Toronto), Senior Lecturer

Program Director: TBA Email: gas-program-supervisor@utsc.utoronto.ca

Global Asia Studies (GAS) is an inter-disciplinary undergraduate program that places Asia within a dynamic global and diasporic context. It enhances our understanding of historical and contemporary global culture and politics by enabling students to engage with an extensive and intensive study of Asia and Asian Diasporas in the past and present. Global Asia Studies uses cutting-edge Humanities methods and theories from a range of different disciplines to explore the societies of East and South Asia and their global ramifications. It aims to locate the academic study of Asia within the fabric of the community through exciting co- and extra-curricular programming and a commitment to socially responsible and educationally rigorous experiential learning.

The curriculum combines a variety of approaches. The first year A-level courses GASA01H3 and GASA02H3 provide a general introduction to Asia in a global context through historical and cultural perspectives respectively. GAS students then move onto courses at the B-level which provide a comprehensive foundation of knowledge in particular areas and fields relevant to the study of Asia. For example, see courses such as GASB05H3.

In C-level courses, students investigate specific areas and problems pertaining to East and South Asia in greater depth. These courses are conducted in lecture and tutorial discussion format. For example, see courses such as GASC20H3. All D-level courses are conducted as small-group seminars where students conduct research and analysis of particular questions or topics, actively participate in class discussions and present their findings in class and in their research essays. For example, see courses such as GASD01H3.

The Global Asia Studies major and specialist programs are designed for those students who wish to acquire more in-depth knowledge of Asia that spans a number of disciplines and may help better prepare them for a variety careers.

Language study for the Global Asia Studies program is particularly important for those students who wish to move onto advanced studies of East or South Asia at the university level, and to acquire a specialized knowledge base for a range of professional and academic opportunities. Languages offered at the university that count towards the Global Asia Studies degree include Hindi, Mandarin Chinese, and Japanese. Currently students should get the Program Director’s written approval before taking any course of such languages offered outside UTSC. The language study requirement is waived in specific cases. Please see the specific requirements for such waivers below.

Guidelines for 1st year course selection
Students who intend to complete a Global Asia Studies Program should include GASA01H3 or GASA02H3 in their 1st year course selection. Students are also strongly encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their studies. The Global Asia Studies Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_ga.html

SPECIALIST PROGRAM IN GLOBAL ASIA STUDIES (ARTS)
Program Supervisor: J. Sharma Email: gas-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 12.0 credits, including at least 4.0 C- and/or D-levels, and at least 1.0 credit must be at the D-level:
1. 0.5 credit as follows:
   GASB05H3 Media and Globalization
   or
   GASB06H3 Asian Visual Culture and Media
   GASB15H3 The Arts of South Asia
   GASB20H3 Gender and Social Institutions in Asia
   GASB30H3 Asian Religions and Cultures

2. 8.0 credits from the courses below including at least 3.0 C-levels:
   GASB05H3 Media and Globalization
   GASB06H3 Asian Visual Culture and Media
   GASB15H3 The Arts of South Asia
   GASB20H3 Gender and Social Institutions in Asia
   GASB30H3 Asian Religions and Cultures
Global Asia Studies 145

GASB31H3 Chinese Thought and Culture in Historical Perspective
GASB33H3 Global Buddhism in Historical and Contemporary Societies
GASB35H3 The Japanese Empire: A Short History
GASB57H3 Sub-Continental Histories: South Asia in the World
GASB58H3 Modern Chinese History
GASB67H3 Religion in the Arts: Buddhist Arts and Cultures
GASB73H3 Visualizing Asia
GASB75H3 Religion in the Arts: Hinduism and Jainism
GASC19H3 Gender in East Asian Science and Technology
GASC20H3 Gendering Global Asia
GASC32H3 Art of Memory: China and the West
GASC33H3 Critical Perspectives in Global Buddhism
GASC40H3 Chinese Media and Politics
GASC41H3 Media and Popular Culture in East and Southeast Asia
GASC42H3 Film and Popular Culture in South Asia
GASC43H3 Colonialisms and Cultures in Modern East Asia
GASC45H3 Film and Popular Cultures in East Asia
GASC50H3 Comparative Studies of East Asian Legal Cultures
GASC53H3 The Silk Routes
GASC57H3 China and the World
GASC73H3 A Tale of Three Cities: Introduction to Contemporary Art in China

3. 1.0 credits from courses listed below:
   GASD01H3 Senior Seminar: Topics in Global Asian Cultures
   GASD02H3 Senior Seminar: Topics in Global Asian Societies
   GASD03H3 Senior Seminar: Special Topics in Global Asia Studies
   GASD20H3 Senior Seminar: Social Change and Gender Relations in Chinese Societies
   GASD40H3 Senior Seminar: Issues in Chinese Media Studies
   GASD56H3 „Coolies“ and Others: Asian Labouring Diasporas in the British Empire
   GASD58H3 Culture, Politics, and Society in the Late Imperial China
   GASD59H3 Law and Society in Chinese History
   GASD46H3 Visual Encounter: The Meeting of Eastern and Western Art

4. 2.5 credits from Asian language courses taught at the university, of which at least 1.5 credits should be from courses taken at the B, C, or D-levels. Preferably, these language courses will be taken in sequence. Specialist students who do not qualify for existing upper-level language courses at the university can (with prior written permission from the Program Supervisor) make up an necessary credits with other GAS courses.

MAJOR PROGRAM IN GLOBAL ASIA STUDIES (ARTS)
Program Supervisor: TBA Email: gas-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 7.5 full credits of which at least 2.0 must be at the C- and/or D-level as follows:

1. 0.5 credits as follows:
   GASA01H3 Introducing Global Asia and its Histories
   or
   GASA02H3 Introduction to Global Asia Studies

2. 3.5 credits from the courses below of which at least 2.0 must be at the C- and or D-level as follows:
   GASB05H3 Media and Globalization
   GASB06H3 Asian Visual Culture and Media
   GASB15H3 The Arts of South Asia
   GASB20H3 Gender and Social Institutions in Asia
   GASB30H3 Asian Religions and Cultures
   GASB31H3 Chinese Thought and Culture in Historical Perspective
   GASB33H3 Global Buddhism in Historical and Contemporary Societies
   GASB35H3 The Japanese Empire: A Short History
   GASB57H3 Sub-Continental Histories: South Asia in the World
   GASB58H3 Modern Chinese History
   GASB67H3 Religion in the Arts: Buddhist Arts and Cultures
   GASB73H3 Visualizing Asia
   GASB75H3 Religion in the Arts: Hinduism and Jainism
   GASC19H3 Gender in East Asian Science and Technology
   GASC20H3 Gendering Global Asia
3. 1.0 credits from D-level courses listed below:
- GASD01H3 Senior Seminar: Topics in Global Asian Cultures
- GASD02H3 Senior Seminar: Topics in Global Asian Societies
- GASD03H3 Senior Seminar: Special Topics in Global Asia Studies
- GASD20H3 Senior Seminar: Social Change and Gender Relations in Chinese Societies
- GASD40H3 Senior Seminar: Issues in Chinese Media Studies
- GASD56H3 „Coolies“ and Others: Asian Labouring Diasporas in the British Empire
- GASD58H3 Culture, Politics, and Society in Late Imperial China
- GASD59H3 Law and Society in Chinese History
- GASD46H3 Visual Encounter: The Meeting of Eastern and Western Art

4. 2.0 credits from Asian language courses taught at the university, of which at least 1.0 credits should be from courses taken at the B, C, or D-levels. Preferably, these language courses will be taken in sequence. Major students who do not qualify for existing upper-level language courses at the university can (with the prior written permission of the Program Supervisor) make up any necessary credits with other GAS courses.

MINOR PROGRAM IN GLOBAL ASIA STUDIES (ARTS)
Program Supervisor: TBA  Email: gas-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 4.0 full credits as follows:

1. 0.5 credits as follows:
   - GASB05H3 Media and Globalization
   - GASB06H3 Asian Visual Culture and Media
   - GASB15H3 The Arts of South Asia
   - GASB30H3 Asian Religions and Cultures
   - GASB31H3 Chinese Thought and Culture in Historical Perspective
   - GASB33H3 Global Buddhism in Historical and Contemporary Societies
   - GASB35H3 The Japanese Empire: A Short History
   - GASB57H3 Sub-Continental Histories: South Asia in the World
   - GASB67H3 Religion in the Arts: Buddhist Arts and Cultures
   - GASB73H3 Visualizing Asia
   - GASB75H3 Religion in the Arts: Hinduism and Jainism
   - GASC19H3 Gender in East Asian Science and Technology
   - GASC20H3 Gendering Global Asia
   - GASC32H3 Art of Memory: China and the West
   - GASC33H3 Critical Perspectives in Global Buddhism
   - GASC40H3 Chinese Media and Politics
   - GASC41H3 Media and Popular Culture in East and Southeast Asia
   - GASC42H3 Film and Popular Culture in South Asia
   - GASC43H3 Colonialisms and Cultures in Modern East Asia
   - GASC45H3 Film and Popular Cultures in East Asia
   - GASC50H3 Comparative Studies of East Asian Legal Cultures
   - GASC53H3 the Silk Routes

2. For the remaining 3.5 credits, students have two options:
   a. complete 3.5 credits from course listed below, of which at least 1.5 credits must be from C- and/or D-level courses listed below; or
   b. complete 2.5 credits from the courses listed below, of which at least 1.0 credit must be from C- and/or D-level courses listed below, plus 1.0 credit from Asian language courses.

   - GASB05H3 Media and Globalization
   - GASB06H3 Asian Visual Culture and Media
   - GASB15H3 The Arts of South Asia
   - GASB30H3 Asian Religions and Cultures
   - GASB31H3 Chinese Thought and Culture in Historical Perspective
   - GASB33H3 Global Buddhism in Historical and Contemporary Societies
   - GASB35H3 The Japanese Empire: A Short History
   - GASB57H3 Sub-Continental Histories: South Asia in the World
   - GASB67H3 Religion in the Arts: Buddhist Arts and Cultures
   - GASB73H3 Visualizing Asia
   - GASB75H3 Religion in the Arts: Hinduism and Jainism
   - GASC19H3 Gender in East Asian Science and Technology
   - GASC20H3 Gendering Global Asia
   - GASC32H3 Art of Memory: China and the West
   - GASC33H3 Critical Perspectives in Global Buddhism
   - GASC40H3 Chinese Media and Politics
   - GASC41H3 Media and Popular Culture in East and Southeast Asia
   - GASC42H3 Film and Popular Culture in South Asia
   - GASC43H3 Colonialisms and Cultures in Modern East Asia
   - GASC45H3 Film and Popular Cultures in East Asia
   - GASC50H3 Comparative Studies of East Asian Legal Cultures
   - GASC53H3 the Silk Routes
GASC57H3 China and the World
GASC74H3 A Tale of Three Cities: Introduction to Contemporary Art in China
GASD01H3 Senior Seminar: Topics in Global Asian Cultures
GASD02H3 Senior Seminar: Topics in Global Asian Societies
GASD03H3 Senior Seminar: Special Topics in Global Asia Studies
GASD20H3 Senior Seminar: Social Change and Gender Relations in Chinese Societies
GASD40H3 Senior Seminar: Issues in Chinese Media Studies
GASD46H3 Visual Encounter: The Meeting of Eastern and Western Art
GASD56H3 ‘Coolies’ and Others: Asian Labouring Diasporas in the British Empire
GASD58H3 Culture, Politics, and Society in Late Imperial China
GASD59H3 Law and Society in Chinese History

GASA01H3 Introducing Global Asia and its Histories
This course introduces Global Asia Studies through studying historical and political perspectives on Asia. Students will learn how to critically analyze major historical texts and events to better understand important cultural, political, and social phenomena involving Asia and the world. They will engage in intensive reading and writing for humanities.
Same as HISA06H3.
Exclusion: HISA06H3
Breadth Requirement: History, Philosophy & Cultural Studies

GASA02H3 Introduction to Global Asia Studies
This course introduces Global Asia Studies through the study of cultural and social institutions in Asia. Students will critically study important elements of culture and society over different periods of history and in different parts of Asia. They will engage in intensive reading and writing for humanities.
Breadth Requirement: Arts, Literature & Language

GASB05H3 Media and Globalization
This course introduces students to the variety of ways cultural and social theorists have addressed notions of “globalization” and the media; and to focus our eyes and research concerns on media systems and practices in the non-western world: Asian, Latin American, and Arabic countries.
Same as MDSB05H3.
Exclusion: (HUMB74H3), MDSB05H3
Breadth Requirement: History, Philosophy & Cultural Studies

GASB06H3 Asian Visual Culture and Media
This course introduces students to contemporary visual culture and media in Asia. Combining theories of visual culture with a focus on Asia, it surveys a diverse array of cultural forms such as advertisements, television series, films, and social media, and examines the role that images play in contemporary Asian societies.
Same as MDSB06H3
Exclusion: MDSB06H3
Breadth Requirement: History, Philosophy & Cultural Studies

GASB15H3 The Arts of South Asia
The course will provide students with an introduction to the arts of South Asia, from classical to modern, and from local to global. Fields of study may include music, dance, drama, literature, film, graphic arts, decorative arts, magic, yoga, athletics, and cuisine, fields viewed as important arts for this society.
Breadth Requirement: Arts, Literature & Language

GASB20H3 Gender and Social Institutions in Asia
This course examines the role of gender in shaping social institutions in Asia.
Breadth Requirement: History, Philosophy & Cultural Studies

GASB30H3 Asian Religions and Culture
This course examines the close relationship between religions and cultures, and the role they play in shaping the worldviews, aesthetics, ethical norms, and other social ideals in Asian countries and societies.
Breadth Requirement: History, Philosophy & Cultural Studies

GASB31H3 Chinese Thought and Culture in Historical Perspective
This course surveys the history of thought and intellectual culture in China from the 7th through the 17th centuries. Topics studied include: the establishment of empire as a norm; literati culture; Neo-Confucianism; aesthetics and landscape painting; the literature of desire; and the contact with the West through Christianity.
Exclusion: EAS215H
Breadth Requirement: History, Philosophy & Cultural Studies

GASB33H3 Global Buddhism in Historical and Contemporary Societies
This course examines the global spread of different versions of Buddhism across historical and contemporary societies.
Prerequisite: GASB30H3 or RLGB02H3 or (RLGB03H3) or GASC33H3 or VPHB67H3 or (VPHC58H3)
Breadth Requirement: History, Philosophy & Cultural Studies

GASB35H3 The Japanese Empire: A Short History
This course introduces the history and culture of the Japanese Empire. It examines the origin and development of modern Japanese colonialism and its legacies in East and Southeast Asia.
Breadth Requirement: History, Philosophy & Cultural Studies

GASB57H3 Sub-Continental Histories: South Asia in the World
A survey of South Asian history, from ancient times to the present day. The course explores diverse and exciting elements of this long history, such as ecology and landscape, religion, trade, literature, and the arts, keeping in mind South Asia's global and diasporic connections.
Africa and Asia Area
Same as HISB57H3
Exclusion: HIS282Y, HIS282H, HISB57H3
Breadth Requirement: History, Philosophy & Cultural Studies

GASB58H3 Modern Chinese History
This course provides an overview of the historical changes and continuities of the major cultural, economic,
political, and social institutions and practices in modern Chinese history.
Africa and Asia Area
Same as HISB58H3
Exclusion: HISB280Y, HISB58H3
Breadth Requirement: History, Philosophy & Cultural Studies

GASC67H3 Religion in the Arts: Buddhist Arts and Cultures
This course will serve as an introduction to the field of Buddhist art historiography, with an emphasis on the relationships between visual arts, Buddhist philosophy and religion, and the cultural manifestations of the faith and its arts across the world. The classes will take advantage of collections at the ROM.
Same as VPHB67H3
Exclusion: VPHB67H3
Breadth Requirement: Arts, Literature & Language

GASB70H3 Images of Women: East Asian Visual Culture
Images of women in East Asia both provoked and became products of changing ideas of tradition, history and nation. Covering a wide variety of media, including painting, prints, photography, and film, this course examines the role of gender images in politics, the impact of imagery on daily experience, and the relationships among artist, image and viewer.
Same as VPHB70H3
Prerequisite: VPHA46H3, GAS01H3, or WSTA01H3
Exclusion: VCC302H, VCC304H, VPHB70H3
Breadth Requirement: Arts, Literature & Language

GASC73H3 Visualizing Asia
A survey of the art of China, Japan, Korean, India, and Southeast Asia. We will examine a wide range of artistic production, including ritual objects, painting, calligraphy, architectural monuments, textile, and prints. Special attention will be given to social contexts, belief systems, and interregional exchanges.
Same as VPHB73H3
Prerequisite: VPAA05H3, VPHA46H3, or GAS01H3
Exclusion: VPHB73H3, FAH261H
Breadth Requirement: Arts, Literature & Language

GASC75H3 Religion in the Arts: Hinduism and Jainism
This course explores Eastern religions and artworks, with a specific focus on Hinduism and Jainism in art from India, Pakistan and Sri Lanka. Investigation of context, use, and symbolism, paralleled with the examination of rituals, beliefs and performance. The classes will take advantage of collections at the ROM.
Same as VPHB75H3
Exclusion: (VPHB55H3), VPHB75H3, (VPHC55H3)
Breadth Requirement: Arts, Literature & Language

GASC19H3 Gender in East Asian Science and Technology
This course examines how gender issues influence the history and contemporary development of science and technology in East Asian societies, including China, Japan, and Korea. Students will gain a critical perspective on the role of gender in shaping scientific knowledge and technological advancements in the context of East Asia.
Same as IEEC32H3, WSTC19H3
Prerequisite: Any 5.0 full credits
Exclusion: IEEC32H3, WSTC19H3
Recommended Preparation: [WSTA01H3 & WSTA03H3] or [GASA01H3 & GAS02H3] or (GASB01H3)
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

GASC20H3 Gendering Global Asia
This course offers students a critical and analytical perspective on issues of gender history, equity, discrimination, resistance, and struggle facing societies in East and South Asia and their diasporas.
Prerequisite: GAS01H3 or GAS02H3
Enrolment Limits: 50
Breadth Requirement: History, Philosophy & Cultural Studies

GASC32H3 Art of Memory: China and the West
This course explores how thinkers in pre-modern China and Europe (from antiquity to the thirteenth century) conceived of memory. Reading through parallels as well as divergences, this course invites reflection on how thinking about memory is bound up with thinking about the self and about the sources of subjective identity.
Prerequisite: GAS01H3 or GAS02H3
Enrolment Limits: 50
Breadth Requirement: History, Philosophy & Cultural Studies

GASC33H3 Critical Perspectives in Global Buddhism
This course critically examines different aspects of Buddhism in global context. It is offered as part of the prestigious TLKY Visiting Professor program.
Prerequisite: Any 4.0 credits
Enrolment Limits: 50
Breadth Requirement: History, Philosophy & Cultural Studies

GASC40H3 Chinese Media and Politics
This course examines the complex and dynamic interplay of media and politics in contemporary China, and the role of the government in this process.
Same as MDSC40H3
Prerequisite: 4.0 credits, including HUMA01H3
Exclusion: MDSC40H3
Enrolment Limits: 75
Breadth Requirement: History, Philosophy & Cultural Studies

GASC41H3 Media and Popular Culture in East and Southeast Asia
This course introduces students to media industries and commercial popular cultural forms in East and Southeast Asia. Topics include reality TV, TV dramas, anime, and manga as well as issues such as regional cultural flows, global impact of Asian popular culture, and the localization of global media in Asia.
Same as IEEC21H3 and MDSC41H3
Prerequisite: 4.0 credits, including HUMA01H3
Exclusion: (HUMC54H3), IEEC21H3, and MDSC41H3
Enrolment Limits: 75
Breadth Requirement: History, Philosophy & Cultural Studies

GASC42H3 Film and Popular Culture in South Asia
This course offers students a critical perspective on film and popular cultures in South Asia. Topics include Bombay, Tamil, and other regional filmic industries, their history, production, and distribution strategies, their themes and
musical genres, and a critical look at the larger social and political meanings of these filmic cultures.
Prerequisite: Any 4.0 credits
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language

**GASC43H3 Colonialisms and Cultures in Modern East Asia**
This course explores Japanese colonialism and its cultures in East Asia. It seeks to understand the central role that culture played in the development of colonialism, modernity, and nationalism in modern Japan, Korea, China, and Taiwan. Key issues include sexuality, race, medicine, mass media, and consumption.
Prerequisite: Any 5 credits including GASA01H3 or GASA02H3 or GASC20H3 or GASC35H3 or HISB57H3 or HISB58H3
Recommended Preparation: GASC35H3
Enrolment Limits: 50
Breadth Requirement: History, Philosophy & Cultural Studies

**GASC45H3 Film and Popular Cultures in East Asia**
This course offers students a critical perspective on film and popular cultures in East Asia. The course examines East Asian filmic industries, and the role they play in shaping worldviews, aesthetics, ethical norms, folk beliefs, and other socio-cultural aspects in China, Hong Kong, Taiwan, Korea, and Japan.
Prerequisite: Any 4.0 credits
Breadth Requirement: Arts, Literature & Language

**GASC50H3 Comparative Studies of East Asian Legal Cultures**
An introduction to the distinctive East Asian legal tradition shared by China, Japan, and Korea through readings about selected thematic issues. Students will learn to appreciate critically the cultural, political, social, and economic causes and effects of East Asian legal cultures and practices.
Same as HISIC56H3
Prerequisite: HISB58H3 or an equivalent B-level history course in East Asia
Exclusion: HISIC56H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

**GASC53H3 The Silk Routes**
The Silk Routes were a lacing of highways connecting Central, South and East Asia and Europe. Utilizing the Royal Ontario Museum's collections, classes held at the Museum and U of T Scarborough will focus on the art produced along the Silk Routes in 7th to 9th century Afghanistan, India, China and the Taklamakan regions. Same as VPHC53H3
Prerequisite: One full credit in art history or in Asian or medieval European history.
Exclusion: VPHC53H3
Breadth Requirement: Arts, Literature & Language

**GASC57H3 China and the World**
A study of the history of China's relationship with the rest of the world in the modern era. The readings focus on China's role in the global economy, politics, religious movements, transnational diasporas, scientific/technological exchanges, and cultural encounters and conflicts in the ages of empire and globalization.
Africa and Asia Area
Same as HISC57H3
Prerequisite: GASA01H3 or GASB58H3
Exclusion: HISC57H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

**GASC74H3 A Tale of Three Cities: Introduction to Contemporary Art in China**
An introduction to Chinese contemporary art focusing on three cities: Beijing, Shanghai, and Guangzhou. Increasing globalization and China's persistent self-renovation has brought radical changes to cities, a subject of fascination for contemporary artists. The art works will be analyzed in relation to critical issues such as globalization and urban change.
Same as VPHC74H3
Prerequisite: 2 full credits at the B-level in Art History, Asian History, and/or Global Asia Studies, including at least one of VPHB39H3, VPHB73H3, HISB58H3, GASC31H3, GASC33H3, or GASC35H3
Exclusion: VPHC74H3
Breadth Requirement: Arts, Literature & Language

**GASD01H3 Senior Seminar: Topics in Global Asian Cultures**
This course offers an in-depth study of important cultural issues in historical and contemporary Asian and diasporic societies. Themes for study include music, art, cinema, media, literature, drama, and representations. It is conducted in seminar format with emphasis on discussion, critical reading, and writing of research papers.
Prerequisite: [GASA01H3 & GASA02H3 & one C-level course from the options in the specialist or major program requirement 2].
Enrolment Limits: 15

**GASD02H3 Senior Seminar: Topics in Global Asian Societies**
This course offers a capstone experience of issues which confront Asian and diasporic societies. Themes include gender, environment, human rights, equity, religion, politics, law, migration, labour, nationalism, post-colonialism, and new social movements. It is conducted in seminar format with emphasis on discussion, critical reading, and writing of research papers.
Prerequisite: [GASA01H3 & GASA02H3 & one C-level course from the options in the specialist or major program requirement 2].
Enrolment Limits: 15

**GASD03H3: Senior Seminar: Special Topics in Global Asia Studies**
This course offers an in-depth, special study of important topics in the study of Global Asia. Special topics will vary from year to year depending on the expertise of the visiting professor. It is conducted in seminar format with emphasis on discussion, critical reading, and writing of research papers.
Prerequisite: Any 8.0 credits
Enrolment Limit: 15
Breadth Requirement: History, Philosophy & Cultural Studies
GASD20H3 Senior Seminar: Social Change and Gender Relations in Chinese Societies

This seminar examines the transformation and perpetuation of gender relations in contemporary Chinese societies. It pays specific attention to gender politics at the micro level and structural changes at the macro level through in-depth readings and research.

Prerequisite: [GASA01H3 & GASA02H3 & one C-level course from the options in the specialist or major program requirement 2].

Enrolment Limits: 15

GASD40H3 Senior Seminar: Issue in Chinese Media Studies

The Chinese government has played a central role in the development of print, electronic and digital media. Recent changes in the political economy of Chinese media have had strong political and cultural implications. This senior seminar course examines the complex and dynamic interplay of media and politics in contemporary China.

Prerequisite: [GASA01H3 & GASA02H3 & one C-level course from the options in the specialist or major program requirement 2].

Enrolment Limits: 15

GASD46H3 Visual Encounter: The Meeting of Eastern and Western Art

This course explores the cultural construction of vision with a particular focus on the encounters between two cultural systems: Euro-American and East Asian. The collision of West and East yielded dramatic results in the realm of visual culture, altering the ways of seeing. Same as VPHD46H3.

Prerequisite: 11 full credits, including at least one of VPHB39H3, VPHB73H3, HISB58H3, GASB31H3, GASB33H3, or GASB35H3 & a further 1.5 full credits at the B- or C-level in Art History, Asian History, and/or Global Asia Studies.

Exclusion: VPHD46H3

Breadth Requirement: Arts, Literature & Language

GASD56H3 'Coolies' and Others: Asian Labouring Diasporas in the British Empire

'Coolie' labourers formed an imperial diaspora linking South Asia and China to the Caribbean, Africa, the Indian Ocean, South-east Asia, and North America. The long-lasting results of this history are evident in the cultural and ethnic diversity of today's Caribbean nations and Commonwealth countries such as Great Britain and Canada.

Africa and Asia Area

Same as HISD56H3

Prerequisite: 8.0 credits, at least 2.0 of which should be at the B- or C-level in Modern History

Exclusion: HISD56H3

Breadth Requirement: History, Philosophy & Cultural Studies

GASD58H3 Culture, Politics, and Society in Late Imperial China

A study of major cultural trends, political practices, social customs, and economic developments in late imperial China (1400-1911) as well as their relevance to modern and contemporary China. Students will read the most recent literature and write a substantive research paper.

0.5 pre-1800 credit

Africa and Asia area

Same as HISD58H3

Prerequisite: 8.0 credits including at least GASAO1H3 or HISB58H3.

Exclusion: HISD58H3

Enrolment Limits: 15

Breadth Requirement: History, Philosophy & Cultural Studies

GASD59H3 Law and Society in Chinese History

A seminar course on Chinese legal tradition and its role in shaping social, political, economic, and cultural developments, especially in late imperial and modern China. Topics include the foundations of legal culture, regulations on sexuality, women's property rights, crime fictions, private/state violence, laws of ethnicities, prison reforms and modernization.

0.5 pre-1800 credit

Africa and Asia area

Same as HISD59H3

Prerequisite: At least 8.0 FCE completed, or [HISB58H3 or GASB58H3]

Exclusion: HISD59H3

Enrolment Limits: 15

Breadth Requirement: History, Philosophy & Cultural Studies

Health Studies

Faculty List

F.D. Burton, B.Sc., M.A. (NYU), Ph.D. (CUNY), Professor Emerita
A.E. Birn, B.A. (Harvard), M.A. (University of Canterbury), Sc.D. (Johns Hopkins), Associate Professor
C. Barakat-Haddad, B.Sc. (Toronto), M.E.S. (York), Ph.D. (McMaster), Assistant Professor
T. Bryant, B.A., M.S.W., Ph.D. (Toronto), Assistant Professor
M. Hunter, B.A. (Sussex), M.A. (Univ. of Natal), Ph.D. (Univ. California, Berkeley), Assistant Professor
M. Silver, B.A., B.S., & M.P.P. (Univ. California, Berkeley), Ph.D. (Univ. of Chicago), Assistant Professor

Undergraduate Counsellor: J. Roopnarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

Health is an extremely important area of study, from a biological, social, and policy perspective. Social scientists consider a wide range of questions, such as: How does individual behaviour affect health? How can we design health care systems and public policy so as to promote health? How does health vary over the life course and between men and women? What can be learned from large scale survey data about health patterns and the health of populations? The Health Studies Program combines relevant courses from a range of disciplines of interest to students who may apply to graduate programs in health or work in health and related professions. Students in Health Studies are encouraged to combine their program with another major in a relevant discipline.
**Guidelines for 1st year course selection**

Students intending to complete a program in Health Studies should take one of the following sets of courses in first year: [ANTA01H3 & ANTA02H3] or [BIOA01H3 & BIOA02H3] or [ECMA01H3 & ECMA05H3] or [GGRA02H3 & GGRA03H3] or [PSYA01H3 & PSYA02H3] or [SOCA01H3 & SOCA02H3].

**Note:** It is Department policy that students must meet all relevant prerequisites, exceptions will be made only in the case of special circumstances. Students should check carefully the prerequisites required for particular B- and C-level courses. Note that some courses (e.g., BIO, ECM & SOC) are part of limited enrolment programs, with first preference in these courses going to students enrolled in those programs.

**MAJOR (CO-OPERATIVE) PROGRAM IN HEALTH STUDIES (ARTS/SCIENCE)**

**Co-op Contact:** askcoop@utsc.utoronto.ca

**Program Admission**

This is a limited enrolment program, which must be completed in conjunction with another Major as part of a 4-year degree. For information on admissions, fees, work terms, and standing in the program, please see the Social Sciences and Humanities Co-operative Programs section of this Calendar.

**Minimum qualifications for entry following first year:** 4.0 credits, including 1.0 from [ANTA01H3 & ANTA02H3] or [BIOA01H3 & BIOA02H3] or [ECMA01H3 & ECMA05H3] or [GGRA02H3 & GGRA03H3] or [PSYA01H3 & PSYA02H3] or [SOCA01H3 & SOCA02H3], plus a cumulative GPA of at least 2.5.

**Program Requirements**

Work terms will be in the health and health-related sectors, and may be in public institutions, in research institutions, and in the private sector. There are two work terms, each of 4 months. In order to be eligible for the first work term, students must complete at least 9 full credits, including the requirement in sections 1 and 3 plus HLTB15H3. Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term.

**Course Requirements**

See requirements for Major Program in Health Studies. In addition, students are required to include HLTD02H3, Health Research Seminar.

**MAJOR PROGRAM IN HEALTH STUDIES (ARTS/SCIENCE)**

**Program Requirements**

This program requires a minimum of 8.0 credits as follows:

**Note:** A single course may be applied to one requirement only even if it is listed more than once.

1. **Background Courses**
   1.5 credits from one of the following groups:
   - [ANTA01H3 & ANTA02H3 & ANTC60H3]
   - [BIOA01H3 & BIOA02H3 & BIOB10H3]
   - [ECMA01H3 & ECMA05H3 & ECMB01H3]
   - [GGRA02H3 & GGRA03H3 & GGRB05H3]
   - [PSYA01H3 & PSYA02H3 & PSYB01H3]
   - [SOCA01H3 & SOCA02H3 & SOCB05H3]

2. **Specialized Methods in Health Studies** (1.5 credits as follows)
   - HLTB15H3 Introduction to Health Research Methodology
   - HLTB01H3 Foundations in Health Studies
   - [HLTD01H3 Advanced Quantitative Health Research Methodology or HLTB11H3 Advanced Qualitative Health Research Methodology]

3. **Introduction to Health** (2.5 credits)
   1.5 credits as follows
   - HLTB03H3 Foundations in Health Studies
   - [HLTB11H3 Health, Aging & the Life Cycle or HLTB02H3 Issues in Child Health & Development or HLTB04H3 Health & the Urban Environment]
   - 1.0 credits from:
     - ANTBI4H3 Biological Anthropology: Beginnings
ANTB15H3 Contemporary Human Evolution and Variation
ANTB19H3 Ethnography and the Comparative Study of Human Societies
ANTB20H3 Culture, Politics and Globalization
ANTB64H3 The Anthropology of Food: Consuming Passions
EESA10H3 Human Health and the Environment
GGRB28H3 Geographies of Disease
HLTB01H3 Health, Aging and the Life Cycle
HLTB02H3 Issues in Child Health and Development
HLTB04H3 Health and the Urban Environment
IDSB04H3 International Health Policy Analysis
PHLB09H3 Biomedical Ethics
PSYB32H3 Abnormal Psychology
PSYB65H3 Human Brain and Behaviour

4. Advanced Health Courses
At least 2.0 credits from:
ANTC61H3 Medical Anthropology: Illness and Healing in Cultural Perspective
ANTC62H3 Medical Anthropology: Biological and Demographic Perspectives
(ANTC63H3) The Anthropology of Food: Human Needs
ANTC67H3 Foundations of Epidemiology
ANTC68H3 Deconstructing Epidemics
ANTD01H3 The Body in Culture and Society
ANTD17H3 Medical Osteology: Public Health Perspectives on Human Skeletal Health
(ANTD23H3) Ethnomedicine
ANTD25H3 Primatology: Public Health Perspectives on Zoonotic Diseases
BIOC17H3 Microbiology I: The Bacterial Cell
BIOC21H3 Vertebrate Histology: Cells and Tissues
(BGYC22H3) Vertebrate Histology: Organs
ECMC34H3 Economics of Health Care
GGRD10H3 Health and Sexuality
HLTC01H3 Directed Research on Health Services and Institutions
HLTC02H3 Women and Health: Past and Present
HLTC03H3 The Politics of Canadian Health Policy
HLTC05H3 Social Determinants of Health
HLTC07H3 Patterns of Health, Disease, and Injuries
HLTC20H3 Introduction to Health Economics
HLTD01H3 Directed Readings in Health Studies
HLTD02H3 Health Research Seminar
IDSC11H3 Issues in International Health
NROD67H3 Psychobiology of Aging

5. 0.5 credit from:
HLTC01H3 Directed Research on Health Services and Institutions
HLTC02H3 Women and Health: Past and Present
HLTC03H3 The Politics of Canadian Health Policy
HLTC05H3 Social Determinants of Health
HLTC07H3 Patterns of Health, Disease, and Injuries
HLTC20H3 Introduction to Health Economics
HLTD01H3 Directed Readings in Health Studies
HLTD02H3 Health Research Seminar
ANTC67H3 Foundations of Epidemiology
ANTC68H3 Deconstructing Epidemics

6. For this program, no more than 3.0 credits can be counted from any single course prefix (e.g., ANT) other than HLT

7. For the Major in Health Studies alone to qualify for B.Sc. Major, at least 5.0 credits taken to complete the program must carry science credit. These include HLTB01H3, HLTB02H3, HLTC07H3, HLTC20H3, HLTD10H3, and any Anthropology option listed as a science credit in the Anthropology section of the Calendar AND included in the Health Studies program requirements above, and any option in Biology, Environmental Science, Neuroscience, and Psychology that is included in the Health Studies program requirements.

Note: Students should check carefully the prerequisites required for particular B- and C-level courses. Note that some courses (e.g., BIO, ECM & SOC) are part of limited enrolment programs, with first preference in these courses going to students enrolled in those programs.
MINOR PROGRAM IN HEALTH STUDIES (ARTS)
Program Requirements
This program requires 4.0 credits as follows:
1. Introduction to Health (2.5 credits)
   1.5 credits as follows:
   - HLTA01H3 Plagues and Peoples
   - HLTB03H3 Foundations in Health Studies
   - HLTTC07H3 Patterns of Health, Disease, and Injuries
   and
   1.0 credits from:
   - ANTBIH3 Biological Anthropology: Beginnings
   - ANTBI5H3 Contemporary Human Evolution and Variation
   - ANTB66H3 The Anthropology of Food: Consuming Passions
   - GRB28H3 Geographies of Disease
   - HLTB01H3 Health, Aging and the Life Cycle
   - HLTB02H3 Issues in Child Health and Development
   - HLTB04H3 Health and the Urban Environment
   - IDSB04H3 International Health Policy Analysis
2. Advanced Health
   1.5 credits from:
   - ANTC61H3 Medical Anthropology: Illness and Healing in Cultural Perspective
   - ANTC62H3 Medical Anthropology: Biological and Demographic Perspectives
   - ANTC63H3 The Anthropology of Food: Human Needs
   - ANTC67H3 Foundations of Epidemiology
   - ANTD23H3 Ethnomedicine
   - ANTD25H3 Primatology: Public Health Perspectives on Zoonotic Diseases
   - ECMC34H3 Economics of Health Care
   - GRD10H3 Health and Sexuality
   - HLTDC01H3 Directed Research on Health Services and Institutions
   - HLTDC02H3 Working with Human Health: Past and Present
   - HLTDC03H3 The Politics of Canadian Health Policy
   - HLTDC05H3 Social Determinants of Health
   - HLTDC20H3 Introduction to Health Economics
   - HLTDC01H3 Directed Readings in Health Studies
   - IDSC11H3 Issues in International Health
3. For this program, no more than 2.0 credits can be counted from any single course prefix (e.g., ANT) other than HLT

HLTA01H3 Plagues and Peoples
Considers the origins, antiquity and impact of plagues on human societies. The course will embrace cultural, evolutionary, epidemiological and ecological themes. Consideration will be given to historic, contemporary and newly-emerging infectious epidemics, with a view to understanding why "plagues" emerge and how their occurrence is intimately linked to human behaviour. Breadth Requirement: Social & Behavioural Sciences

HLTB01H3 Health, Aging and the Life Cycle
This course focuses on the transition from birth to old age and changes in health status. Topics to be covered include: socio-cultural perspectives on aging, the aging process, chronic and degenerative diseases, caring for the elderly. Prerequisite: HLTA01H3 or [ANTA01H3 & ANTA02H3] or [BIOA01H3 & BIOA02H3] or [PSYA01H3 & PSYA02H3] Breadth Requirement: Social & Behavioural Sciences

HLTB02H3 Issues in Child Health and Development
This course will explore bio-social aspects of health and development in children. Topics for discussion include genetics and development, growth and development, childhood diseases, the immune system, and nutrition during the early years. Prerequisite: HLTA01H3 or [ANTA01H3 & ANTA02H3] or [BIOA01H3 & BIOA02H3] or [PSYA01H3 & PSYA02H3] Breadth Requirement: Social & Behavioural Sciences

HLTB03H3 Foundations in Health Studies
This course is designed to introduce theory, contemporary topics, and analytical techniques related to the study of health issues. Examples of topics include: social determinants of health, basic anatomy, introduction to child development, introduction to the life course and aging, disease, health economics and policy, and applicable research methods. Prerequisite: HLTA01H3
Corequisite: HLTB01H3 or HLTB02H3
Recommended Preparation: High School Biology is advisable
Breadth Requirement: Social & Behavioural Sciences

HLTB04H3 Health and the Urban Environment
Described literally as 'deathtraps of humankind', urban centres prior to 1900 subjected their inhabitants to crowded living conditions, poor sanitation, increased inter-personal contact and, at times, excessive mortality through acute infections. Using a holistic approach, the course will trace the
origin and development of cities with particular emphasis on
the importance and development of housing infrastructure,
food by-laws, water supply, sanitation system, medical
facilities and their role in influencing the health of urban
dwellers.
Prerequisite: Any A-level course Exclusion: (ANTB56H3)
Breadth Requirement: Social & Behavioural Sciences

HLTB15H3 Introduction to Health Research Methodology
The objective of this course is to introduce students to the
main principles that are needed to undertake health-related
research. Students will be introduced to the concepts
and approaches to health research, the nature of scientific
inquiry, the role of empirical research, and epidemiological
research designs.
Prerequisite: HLTA01H3 Exclusion: (HLTA10H3)
Enrolment Limit: 150
Breadth Requirement: Social & Behavioural Sciences

HLTC01H3 Directed Research on Health Services and
Institutions
Provides students with the opportunity to analyze work of
health institutions. Students taking this course will arrange, in
consultation with the instructor, to work as a volunteer in a
health institution. They will write a major research paper
related to some aspect of their experience. They will build on
material learned in IDSB04H3 and complement work in
HLTC03H3. Students must obtain consent from the
Supervisor of Studies and supervising instructor before
registering for this course.
Prerequisite: HLTA01H3 & IDSB04H3 & permission of the
instructor & a cumulative GPA of at least 3.0

HLTC02H3 Women and Health: Past and Present
This course uses historical, anthropological, philosophical
approaches to further understand the relationships
intertwining women, health and society. Women's interactions
with the health sector will be examined. Particular attention
will be devoted to the social and gender construction of
disease and the politics of women's health.
Prerequisite: ANTC61H3 or IDSB04H3 or B-level course on
women's studies/gender
Breadth Requirement: Social & Behavioural Sciences

HLTC03H3 Politics of Canadian Health Policy
This course examines the role of all levels of Canadian
government in health and health care. The impact of public
policies, health care policy, and access to health care services
on the health of populations is considered. The course also
examines the role of political parties and social movements in
the policy change process.
Prerequisite: HLTA01H3 & POLB50H3 & POLB52H3
Exclusion: (POLC55H3)
Breadth Requirement: Social & Behavioural Sciences

HLTC05H3 Social Determinants of Health
This course introduces the social determinants of health, a
key feature of health research and investigations into
inequalities in population health. What are the social
determinants of health? How do they affect health outcomes?
What role can governments, citizens, and social movements
have in improving health and reducing health inequalities.
Prerequisite: HLTB03H3 Enrolment Limit: 130
Breadth Requirement: Social & Behavioural Sciences

HLTC07H3 Patterns of Health, Disease, and Injuries
This course will introduce students to regional, national,
and global patterns of health, disease, and injuries. The course
will demonstrate how demography and epidemiology can be
used to examine these patterns and to assess the cause of
health-related problems in order to provide a basis for broad-
based preventative action.
Prerequisite: HLTA01H3 and (HLTB15H3 or (HLTA10H3))
Enrolment Limit: 90
Breadth Requirement: Natural Sciences

HLTC15H3 Introduction to Quantitative and Qualitative
Health Research Methodologies
The objective of the course is to introduce students to the
research methods and approaches used by health and social
scientists to investigate health issues. Students will learn
about the experimental method, survey method in health
research, qualitative interviews, ethnography, among other
methods. The course will expand their research skills set in
health sciences and the social sciences. They will also learn
quantitative and qualitative data analysis approaches.
Prerequisite: HLTA01H3 & ([HLTA103) or HLTB15H3]
Exclusion: (HLTB10H3)
Enrolment Limit: 80
Breadth Requirement: Social & Behavioural Sciences

HLTC20H3 Introduction to Health Economics
Introduction to health economic evaluation and quantitative
tools relevant to Canadian healthcare. Topics: healthcare as a
public good, demand, supply, health insurance, financing,
equity, and survey of economic evaluation techniques
including: cost analysis, cost-effectiveness analysis, cost-
utility and cost-benefit analysis; critical assessment of
economic evaluation and presentation/see of economic
evaluation results.
Prerequisite: HLTA01H3 & HLTB15H3 or (HLTA10H3)
& [HTLC15H3 or (HLTB10H3)]
Enrolment Limit: 60
Breadth Requirement: Quantitative Reasoning

HLTD01H3 Directed Readings in Health Studies
This is an advanced reading course in special topics for
upper level students who have completed the available basic
courses in Health Studies and who wish to pursue further
intensive study on a relevant topic. Topic selection and
approval will depend on the supervising instructor. Students
must meet all prerequisites and obtain consent from the
supervising instructor before registering for this course.
Prerequisite: A minimum of 15 credits including completion
of the following requirements for the Major Program in
Health Studies: 1) Background Courses and Methodology, 2)
Specialized methods, and 3) Introduction to Health or
Health Studies: 1) Background Courses and Methodology, 2)
Enrolment Limit: 90
Breadth Requirement: Quantitative Reasoning

HLTD02H3 Health Research Seminar
Provides senior students with the opportunity to apply
methodological skills to a health research problem. Students
will give presentations of their research proposals, and there may be a guest seminar on health research projects. Prerequisite: Students must have completed 6.0 credits from the requirements of the Major Program in Health Studies, including completing the methodology requirements from Requirements 1 and 2. Enrolment Limits: Limited to students in the Major (Co-operative) Program in Health Studies. Students who are non-coop majors in Health Studies may take the course with permission of the instructor.

**HLTD10H3 Advanced Quantitative Health Research Methodology**

This course covers economic principles and econometric methods in health studies research. Students will be expected to complete assignments using statistical programming software and to conduct their own analysis of quantitative data.

**Prerequisite:** [HLTB15H3 or (HLTA10H3)] & [HLTC15H3 or (HLTB10H3)]

**Enrolment Limit:** 15

**Breadth Requirement:** Quantitative Reasoning

**HLTD11H3 Advanced Qualitative Health Research Methodology**

This course introduces students to advanced qualitative health research methodologies. Students will become proficient in advanced sampling methods, in-depth interviewing, focus group designs, the role of qualitative health research in healthcare settings, linking qualitative to quantitative research, addressing ethical issue, and applying methodological and epistemological qualitative data collection and analysis.

**Prerequisite:** [HLTB15H3 or (HLTA10H3)] & [HLTC15H3 or (HLTB10H3)]

**Enrolment Limit:** 15

**Breadth Requirement:** Social & Behavioural Sciences

---

**History**

**Faculty List**

E.W. Dowler, M.A. (Harvard), Ph.D. (London School of Economics), *Professor Emeritus*

M. Eksteins, B.A. (Toronto), B.Phil., D.Phil. (Oxon.), *Professor Emeritus*

J.S. Moir, M.A., Ph.D. (Toronto), D.D. (Presb. College, Montreal), *Professor Emeritus*

L.R. Robertson, M.A. (McGill), Ph.D. (Toronto), *Professor Emeritus*

A. Sheps, M.A., Ph.D. (Toronto), *Associate Professor Emeritus*

M. Gervers, A.B. (Princeton), M.A. (Poitiers), Ph.D. (Toronto), *Professor Emeritus*

R. Halpern, M.A. (Wisconsin), Ph.D. (Pennsylvania), *Professor and Dean*

F. Iacovetta, M.A., Ph.D. (York), *Professor*

D.E. Bender, M.A., Ph.D. (New York), *Canada Research Chair, Associate Professor*

R.A. Kazal, M.A., Ph.D. (Pennsylvania), *Associate Professor*

S.J. Rockel, M.A., Ph.D. (Toronto), *Associate Professor*

K. Blouin, B.A., M.A., Ph.D. (Laval and Nice), *Assistant Professor*

L. Chen, B.A. (Beijing Foreign Studies), M.A. (SUNY Buffalo), J.D. (Illinois), M.A., M.Ph., Ph.D. (Columbia), *Assistant Professor*

P. Hastings, M.A. (Carlton), Ph.D. (Duke), *Assistant Professor*

W. Nelson, M.A., Ph.D. (UCLA), *Assistant Professor*

E.N. Rothman, M.A. (Tel Aviv), Ph.D. (Michigan), *Assistant Professor*

J. Sharma, B.A. (Lady Shri Ram), M.A. (Hindu), M.Phil. (Delhi), Ph.D. (Cantab), *Assistant Professor*

C. Berkowitz, B.A. (Colorado), Ph.D. (Toronto), *Lecturer*

**Program Director:** D.E. Bender (416-287-7140) *Email:* debender@utsc.utoronto.ca

The study of History is vital for our understanding of the present. It offers multiple ways of explaining both how the contemporary world emerged, and how past societies differed from our own. The History Program at UTSC provides a dynamic introduction to the global transformations that have taken place over the past two millennia, while also focusing on the experiences and contributions of ordinary men and women to these transformations. Our curriculum spans the history of all parts of the world in their complex, transnational connections, and covers a broad range of topics, including religion and everyday life, colonialism, the relations between women and men, the history of work, the environment, urbanization, immigration, race and ethnicity, and material culture. Findings in history depend upon the precise evaluation of specific evidence, be it texts, images, or objects, and objects, and the History Program emphasizes the critical reading, research, and writing skills which are necessary for the study of the past and for a wide range of professional activities beyond the university. Innovative and interdisciplinary, History courses play a part in a number of other programs, including Classics, Global Asia Studies, and Intersections in the Humanities, and can also complement and enhance courses in Politics, Philosophy, Literature, Arts, Economics, Sociology, and Anthropology.

The History curriculum encompasses a variety of approaches in order to build a range of knowledge and skills. A-level courses provide both a general introduction to the study of history at the university level and the preparation for further studies in transnational and global history. B-level surveys offer a comprehensive foundation of knowledge in their particular areas, including the histories of particular nation-states and regions of the world. In C-level courses, students investigate more specific places, periods, or problems through lectures and tutorials. D-level courses are conducted as seminars, where students make close and thorough studies of particular questions and present their findings in discussions, essays, and research papers. History courses at all levels cover a range of periods, from antiquity to the present, and explore a variety of world regions, from North America and Africa, through Europe and the Mediterranean, to South and East Asia. The History curriculum as a whole stresses training in writing, research, and historical
methods; these skills are also the focal point of two specialized courses, HISB03H3-Critical Writing and Research for Historians and HISC01H3-History and Evidence.

Knowledge of other languages is essential to advanced study in history. If you plan to take history to an advanced level, we strongly encourage early study of an appropriate language for your program or areas of interest. Specialists may enrol in the Language Stream, which is designed to foster such language training.

The History Study Guide is available at:  www.utsc.utoronto.ca/~humdiv/prg_hi.html
Guidelines for 1st year course selection

Students intending to complete a program in History should take two of the following courses in the first year: HISA04H3, HISA05H3, HISA06H3/GASA01H3, HISA07H3/CLAA04H3.

Note: The History discipline urges students who plan to specialize or major in History to take HUMA01H3 (Exploring Key Questions in Humanities) at the beginning of their studies.

Note: Students are advised to consult the prerequisites for C-level and D-level courses when planning their individual Programs.

Note: For Co-op opportunities related to the Specialist and Major Programs in History, please see the Humanities and Social Sciences Co-operative section of this Calendar.

SPECIALIST PROGRAM IN HISTORY (ARTS)
Undergraduate Advisor: 416-287-7184 Email: history-undergrad-advisor@utsc.utoronto.ca

Program Requirements
1. Number of Credits
   Students must complete at least twelve full credits in History. These twelve must include two of  HISA04H3, HISA05H3, HISA06H3/GASA01H3, HISA07H3/CLAA04H3 as well as HIS03H3, HISC01H3 and five (in addition to  HISC01H3) full credits at the C- or D-level. At least one of the five C-or D-level credits must be at the D-level.

2. Pre-1800 Credits
   Of the twelve credits, at least two full credits must deal with the period prior to 1800.

3. Areas of Study
   Students are required to include in their program five full credits distributed over four of the following areas:
   a) Canadian
   b) United States and Latin America
   c) Medieval
   d) European
   e) Africa and Asia,
   f) Transnational
   g) Ancient World

Specialist Program in History-Language Stream
   Students registered in the Specialist Program in History have the option of registering in the Language Stream. Students in the Language Stream must complete the Specialist Program in History and 2.0 credits in a single language. This option is designed to encourage Specialists to undertake language study with an eye to engaging historical writing and sources in the original language. Specialists who wish to demonstrate proficiency in a given language on their transcript should undertake the additional study that would qualify them for the UTSC Language Citation.

MAJOR PROGRAM IN HISTORY (ARTS)
Undergraduate Advisor: 416-287-7184 Email: history-undergrad-advisor@utsc.utoronto.ca

Program Requirements
1. Number of Credits
   Students must complete seven full credits in History. These seven must include two of  HISA04H3, HISA05H3, HISA06H3/GASA01H3, HISA07H3/CLAA04H3 as well as HIS03H3 and 3.0 credits at the C- or D-level.

2. Pre-1800 Credits
   Of the seven credits at least 1.5 credits must deal with the period prior to 1800.

3. Areas of Study
   Students must take one full credit in Canadian history and at least one half credit in two of the following areas of history:
   a) United States and Latin America
   b) Medieval
   c) European
   d) Africa and Asia
   e) Transnational
   f) Ancient World

MINOR PROGRAM IN HISTORY (ARTS)
Undergraduate Advisor: 416-287-7184 Email: history-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete four full credits in History, of which at least one full credit must be at the C- and/or D-level.
HISA04H3 Themes in World History I
An introduction to history that focuses on a particular theme in world history, which will change from year to year. Themes may include migration; empires; cultural encounters; history and film; global cities. Breadth Requirement: History, Philosophy & Cultural Studies

HISA05H3 Themes in World History II
An introduction to history that focuses on a particular theme in world history, which will change from year to year. Themes may include migration; empires; cultural encounters; history and film; global cities. Breadth Requirement: History, Philosophy & Cultural Studies

HISA06H3 Introducing Global Asia and its Histories
This course introduces Global Asia Studies through studying historical and political perspectives on Asia. Students will learn how to critically analyze major historical texts and events to better understand important cultural, political, and social phenomena involving Asia and the world. They will engage in intensive reading and writing for humanities. Same as GASA01H3 Exclusion: GASA01H3 Breadth Requirement: History, Philosophy & Cultural Studies

HISA07H3 The Ancient Mediterranean World
An introduction to the main features of the ancient civilizations of the Mediterranean world from the development of agriculture to the spread of Islam. Long term socio-economic and cultural continuities and ruptures will be underlined, while a certain attention will be dedicated to evidences and disciplinary issues. Same as CLAA04H3 Exclusion: CLAA04H3 Breadth Requirement: History, Philosophy & Cultural Studies

HISA10H3 Hellhound on My Trail: Living the Blues in the Mississippi Delta, 1890-1945
This course examines black life and culture in the cotton South through the medium of the blues. Major topics include: land tenure patterns in southern agriculture, internal and external migration, mechanisms of state and private labour control, gender conventions in the black community, patterns of segregation and changing race relations. Exclusion: HIS478H Enrolment Limit: 18 Breadth Requirement: History, Philosophy & Cultural Studies

HISB02H3 The British Empire: A Short History
The British Empire at one time controlled a quarter of the world's population. This course surveys the nature and scope of British imperialism from the sixteenth to the twentieth century, through its interactions with people and histories of Asia, Africa, the Americas, the Caribbean, the Pacific, and the British Isles. Transnational Area Breadth Requirement: History, Philosophy & Cultural Studies

HISB03H3 Critical Writing and Research for Historians
Practical training in critical writing and research in History. Through lectures, discussion and workshops, students will learn writing skills (including essay organization, argumentation, documentation and bibliographic style), an introduction to methodologies in history and basic source finding techniques. Exclusion: (HISB01H3) Enrolment Limits: 25 Breadth Requirement: History, Philosophy & Cultural Studies

HISB10H3 History and Culture of the Greek World
A survey of the history and culture of the Greek world from the Minoan period to the Roman conquest of Egypt (ca. 1500-30 BC). Special attention will be dedicated to the nature, variety and limits of the available evidences, to socio-cultural interactions as well as to historical processes of continuities and ruptures. Same as CLAB05H3 0.50 pre-1800 credit Ancient World Area Exclusion: CLAB05H3, CLA230H Enrolment Limits: 15 Breadth Requirement: History, Philosophy & Cultural Studies

HISB11H3 History and Culture of the Roman World
A survey of the history and culture of the ancient Roman world, from the Etruscan period to the Justinian dynasty (ca 800 BC-600 AD). Special attention will be dedicated to the nature, variety and limits of the available evidences, to socio-cultural interactions as well as to historical processes of continuities and ruptures. Same as CLAB06H3 0.50 pre-1800 credit Ancient World Area Exclusion: CLAB06H3, CLA231H Breadth Requirement: History, Philosophy & Cultural Studies

HISB30H3 American History to the Civil War
A survey of American history from contact between Indians and Europeans up through the Civil War. Topics include the emergence of colonial societies; the rise and destruction of racial slavery; revolution and republic-making; economic and social change in the new nation; western conquest; and the republic's collapse into internal war. United States and Latin America Area Exclusion: HIS271Y Breadth Requirement: History, Philosophy & Cultural Studies

HISB31H3 History of the United States since the Civil War
This course offers a survey of U.S. history from the post-Civil War period through the late 20th century, examining key episodes and issues such as settlement of the American West, industrialization, urbanization, immigration, popular culture, social movements, race relations, and foreign policy. United States and Latin America Area Exclusion: HIS271Y Breadth Requirement: History, Philosophy & Cultural Studies

HISB40H3 Early Canada and the Atlantic World
The history of northern North America from the first contacts between Europeans and Aboriginal peoples to the late 19th century. Topics include the impact of early exploration and cultural encounters, empires, trans-Atlantic migrations, colonization and revolutions on the development of northern North America. Canadian Area Exclusion: (HIS262Y), HIS263Y Breadth Requirement: History, Philosophy & Cultural Studies
HISB41H3 Making of Modern Canada
Students will be introduced to historical processes central to the history of Canada’s diverse peoples and the history of the modern age more generally, including the industrial revolution, women’s entry into social and political “publics,” protest movements, sexuality, and migration in the context of international links and connections.
Canadian Area
Enrolment Limit: 125
Breadth Requirement: History, Philosophy & Cultural Studies

HISB50H3 Africa in the Nineteenth Century
An introduction to the history of Sub-Saharan Africa, from the era of the slave trade to the colonial conquests. Throughout, the capacity of Africans to overcome major problems will be stressed. Themes include slavery and the slave trade; pre-colonial states and societies; economic and labour systems; and religious change.
Africa and Asia Area
Prerequisite: Any modern history course or AFSA01H3.
Exclusion: (HISC50H3), HIS295H, HIS396H, (HIS396Y).
Breadth Requirement: History, Philosophy & Cultural Studies

HISB51H3 Twentieth Century Africa
Modern Sub-Saharan Africa, from the colonial conquests to the post-colonial era of structural adjustment. The emphasis is on both structure and agency in a hostile world. Themes include conquest and resistance; colonial economies; gender and ethnicity; religious and political movements; development and underdevelopment, post-colonial conflicts, as well as cultural achievements.
Africa and Asia Area
Prerequisite: None, but AFSA01H3 or HISB50H3 strongly recommended.
Exclusion: (HISC51H3), HIS396H, (HIS396Y)
Breadth Requirement: History, Philosophy & Cultural Studies

HISB57H3 Sub-Continental Histories: South Asia in the World
A survey of South Asian history, from ancient times to the present day. The course explores diverse and exciting elements of this long history, such as ecology and landscape, religion, trade, literature, and the arts, keeping in mind South Asia’s global and diasporic connections.
Africa and Asia Area
Same as GASB57H3
Exclusion: HIS282Y, HIS282H, GASB57H3
Breadth Requirement: History, Philosophy & Cultural Studies

HISB58H3 Modern Chinese History
This course provides an overview of the historical changes and continuities of the major cultural, economic, political, and social institutions and practices in modern Chinese history.
Africa and Asia Area
Same as GASB58H3
Prerequisite: HISIA01H3 or HISIA02H3 or GASIA01H3 or GASIA02H3
Exclusion: HIS280Y, GASB58H3
Breadth Requirement: History, Philosophy & Cultural Studies

HISB60H3 Europe in the Early Middle Ages (305-1053)
The development of Europe from the Late Roman period to the eleventh-century separation of the Roman and Byzantine Churches. The course includes the foundation and spread of Christianity, the settlement of "barbarians" and Vikings, the establishment of Frankish kingship, the Empire of Charlemagne, and feudalism and manorialism.
0.50 pre-1800 credit
Medieval Area
Exclusion: HIS220Y
Breadth Requirement: History, Philosophy & Cultural Studies

HISB61H3 Europe in the High and Late Middle Ages (1053-1492)
An introduction to the social, political, religious and economic foundations of the Western world, including Church and State relations, the Crusades, pilgrimage, monasticism, universities and culture, rural exploitation, town development and trade, heresy, plague and war. Particular attention will be devoted to problems which continue to disrupt the modern world.
0.50 pre-1800 credit
Medieval Area
Exclusion: HIS220Y
Breadth Requirement: History, Philosophy & Cultural Studies

HISB62H3 The Early Modern Mediterranean, 1500-1800
An exploration of the interplay of culture, religion, politics and commerce in the Mediterranean region from 1500 to 1800. Through travel narratives, autobiographical texts, and visual materials we will trace how men and women on the Mediterranean’s European, Asian, and African shores experienced their changing world.
0.50 pre-1800 credit
Transnational Area
Breadth Requirement: History, Philosophy & Cultural Studies

HISB92H3 Modern Europe: From 1789 to the Present
Europe from the French Revolution of 1789 to the present day. Major topics include revolution, industrialization, nationalism, imperialism, the World Wars, economic crisis, cultural modernism, the Holocaust, the Cold War, and the European Union.
Exclusion: (HISC90H3), (HISC91H3), HIS241H, HIS242H
Breadth Requirement: History, Philosophy & Cultural Studies

HISC01H3 History and Evidence
An examination of the nature and uses of evidence in historical and related studies. Historians use a wide variety of sources as evidence for making meaningful statements about the past. This course explores what is meant by history and how historians evaluate sources and test their reliability as historical evidence.
Prerequisite: HISIB03H
Breadth Requirement: History, Philosophy & Cultural Studies

HISC03H History of Animals and People
An examination of the places of animals in global history. The course examines on-going interactions between humans and animals through hunting, zoos, breeding, and pets and the historical way the divide between humans and animals has been measured. Through animals, people have often thought about what it means to be human.
Same as IEEC03H
Transnational Area
Prerequisite: Any 2.5 credits in History
HISC08H3 Colonialism on Film
An examination of the depiction of empires and the colonial and postcolonial experience on film. This course also introduces students to the development of national cinemas in Asia, Africa, the Caribbean and the South Pacific. The relationship between academic history and history as imagined by filmmakers is a key theme.
Transnational Area
Exclusion: (HISB18H3)
Breadth Requirement: History, Philosophy & Cultural Studies

HISC10H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
This course provides a review of the environmental, social and economic features of Egypt from 332 BC to 642 AD. Same as IEEC52H3, CLAC05H3
0.50 pre-1800 credit
Ancient World Area
Prerequisite: Any 5 full credits including 1 full credit in Classical Studies or History
Exclusion: IEEC52H3, CLAC05H3
Recommended Preparation: CLAB05H3 & CLAB06H3
Breadth Requirement: History, Philosophy & Cultural Studies

HISC11H3 Multiculturalism and Cultural Identities in the Greek and Roman Worlds
A critical examination of multiculturalism and cultural identities in the Greek and Roman worlds. Special attention will be dedicated to the evidences through which these issues are documented and to their fundamental influence on the formation and evolution of ancient Mediterranean societies and cultures.
Same as CLAC24H3
0.5 pre-1800 credit
Ancient World Area
Prerequisite: One full credit in Classics or History
Exclusion: CLAC24H3
Recommended Preparation: CLAB05H3 & CLAB06H3
Breadth Requirement: History, Philosophy & Cultural Studies

HISC14H3 Edible History: History of Global Foodways
An exploration of how eating traditions around the world have been affected by economic and social changes, including imperialism, migration, the rise of a global economy, and urbanization. Topics include: immigrant cuisines, commodity exchanges, and the rise of the restaurant. Lectures will be supplemented by cooking demonstrations.
Transnational Area
Prerequisite: 2.5 credits in History
Breadth Requirement: History, Philosophy & Cultural Studies

HISC18H3 Europe in the Enlightenment, 1700-1789
An examination of the ideals of the Enlightenment against the background of social and political change in eighteenth-century Europe. This course looks at Enlightenment thought and the ways in which European monarchs like Frederick the Great and Catherine the Great adapted it to serve their goals of state building.
0.50 pre-1800 credit
European Area
Prerequisite: 1.0 credit at B-level in European history
Exclusion: HIS244H, HIS341Y
Breadth Requirement: History, Philosophy & Cultural Studies

HISC26H3 The French Revolution and the Napoleonic Empire
The course will present the causes, processes, principles, and effects of the French Revolution. It will additionally present the relationship between the French Revolution and the Haitian Revolution, and look at the rise of Napoleon Bonaparte.
Exclusion: HIS457H
Breadth Requirement: History, Philosophy & Cultural Studies

HISC27H3 The History of European Sexuality: From Antiquity to the Present
The course will cover major developments in sexuality in Europe since antiquity. It will focus on the manner in which social, political, and economic forces influenced the development of sexuality. It will also analyze how religious beliefs, philosophical ideas, and scientific understanding, influenced the ways that sexuality was understood.
Enrolment Limit: 60
Breadth Requirement: History, Philosophy & Cultural Studies

HISC32H3 The Emergence of Modern America, 1877-1933
Overview of the political and social developments that produced the modern United States in the half-century after 1877. Topics include urbanization, immigration, industrialization, the rise of big business and of mass culture, imperialism, the evolution of the American colour line, and how Americans used politics to grapple with these changes.
United States and Latin America Area
Prerequisite: HISB30H3 & HISB31H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

HISC33H3 Modern American Political Culture
An examination of the relationship between culture and politics in modern American history. The course considers culture as a means through which Americans expressed political desires. Politics, similarly, can be understood as a forum for cultural expression. Topics include imperialism, immigration and migration, the Cold War, and the "culture wars".
United States and Latin America Area
Prerequisite: [HISB30H3 & HISB31H3]
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

HISC36H3 People in Motion: Immigrants and Migrants in U.S. History
Overview of the waves of immigration and internal migration that have shaped America from the colonial period to the present. Topics include colonization and westward migration, immigrants in the industrial and contemporary eras, nativism, stances towards pluralism and assimilation, and how migration experiences have varied by race, class, and gender.
United States and Latin America Area
Prerequisite: [HISB30H3 & HISB31H3]
Breadth Requirement: History, Philosophy & Cultural Studies
HISC38H3  Mexico Through American Eyes
This course focuses on the period of the Mexican revolution, 1910 through 1940, and will explore the influence of this political and social upheaval on changing cultural relations between the peoples of the United States and Mexico as seen through the work of foreign travellers, journalists, writers, filmmakers and photographers.
United States and Latin America Area
Prerequisite: HISC30H3 and HISC31H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

HISC45H3  Immigrants and Race Relations in Canadian History
An examination of aspects of the history of immigrants and race relations in Canada, particularly for the period 1840s-1960s. The course covers various immigrant and racialized groups and explores how class, gender and race/ethnicity shaped experiences and racial/ethnic relations.
Canadian Area
Prerequisite: Any 4.0 credits
Breadth Requirement: History, Philosophy & Cultural Studies

HISC46H3  Canada and the World
A look at Canada’s evolution in relation to developments on the world stage. Topics include Canada’s role in the British Empire and its relationship with the U.S., international struggles for women’s rights, Aboriginal people’s sovereignty and LGBT equality, socialism and communism, the World Wars, decolonization, the Cold War, humanitarianism, and terrorism.
Canadian Area
Prerequisite: Any 4.0 credits
Exclusion: HISB31H3, HISB31Y
Recommended Preparation: HISC40H3 & HISB41H3
Breadth Requirement: History, Philosophy & Cultural Studies

HISC52H3  A History of Ethiopia
Ethiopia from the fourth through the nineteenth century, with particular emphasis on the Christian Church, the monarchy, links with both the Mediterranean world and the Indian subcontinent, and the relationship of individuals to their social, economic, artistic and geographic environments.
0.50 pre-1800 credit
Africa and Asia Area
Prerequisite: 1.0 credit in History
Breadth Requirement: History, Philosophy & Cultural Studies

HISC55H3  War and Society in Modern Africa
Conflict and social change in Africa from the slave trade to contemporary times. Topics include the politics of resistance, women and war, repressive and weak states, the Cold War, guerrilla movements, resource predation. Case studies of anticolonial rebellions, liberation wars, and civil conflicts will be chosen from various regions.
Africa and Asia Area
Prerequisite: HISC50H3 or HISC51H3 or (HISC50H3) or (HISC51H3)
Breadth Requirement: History, Philosophy & Cultural Studies

HISC56H3  Comparative Studies of East Asian Legal Cultures
An introduction to the distinctive East Asian legal tradition shared by China, Japan, and Korea through readings about selected thematic issues. Students will learn to appreciate critically the cultural, political, social, and economic causes and effects of East Asian legal cultures and practices.
Same as GASC50H3
Africa and Asia Area
Prerequisite: HISB58H3 or an equivalent B-level history course in East Asia.
Exclusion: GASC50H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

HISC57H3  China and the World
A study of the history of China’s relationship with the rest of the world in the modern era. The readings focus on China’s role in the global economy, politics, religious movements, transnational diasporas, scientific/technological exchanges, and cultural encounters and conflicts in the ages of empire and globalization.
Africa and Asia Area
Same as GASC57H3
Prerequisite: HISB06H3 or HISB58H3
Exclusion: GASC57H3
Enrolment Limits: 40
Breadth Requirement: History, Philosophy & Cultural Studies

HISC58H3  Delhi and London: Imperial Cities, Mobile People
Delhi and London were two major cities of the British Empire. This course studies their parallel destinies, from the imperial into the post-colonial world. It explores how diverse cultural, ecological, and migratory flows connected and shaped these cities, using a wide range of literary, historical, music, and film sources.
Transnational Area
Prerequisite: [Two of (HISA01H3), (HISA02H3), (HISA04H3), (HISA05H3)] or 1.0 credit in Modern History
Breadth Requirement: History, Philosophy & Cultural Studies

HISC60H3  Old Worlds? Strangers and Foreigners in the Mediterranean, 1200-1700
An exploration of how medieval and early modern societies encountered foreigners and accounted for foreignness, as well as for religious, linguistic, and cultural difference more broadly. Topics include: monsters, relics, pilgrimage, the rise of the university, merchant companies, mercenaries, piracy, captivity and slavery, tourism, and the birth of resident embassies.
Same as IEEC51H3
0.50 pre-1800 credit
Transnational Area
Corequisite: At least one of HISB60H3, HISB61H3 or HISB62H3
Exclusion: IEEC51H3
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

HISC65H3  Venice and its Empire, 800-1800
Social and cultural history of the Venetian Empire from a fishermen’s colony to the Napoleonic Occupation of 1797. Topics include the relationships between commerce and colonization in the Mediterranean, state building and piracy, aristocracy and slavery, civic ritual and spirituality, guilds and confraternities, households and families.
Canada, and Europe from the late 19th century to the present. The migration of Caribbean peoples to the United States, and labour demands, the World Wars, evolving imperial relationships, pan-Africanism and international unionism, decolonization, natural disasters, and globalization shaped this migration.

Prerequisite: Any 4.0 credits
Breadth Requirement: History, Philosophy & Cultural Studies

HISD01H3 Independent Studies: Senior Research Project
This option is available in rare and exceptional circumstances to students who have demonstrated a high level of academic maturity and competence. Qualified students will have the opportunity to investigate an historical field which is of common interest to both student and supervisor.
Prerequisite: At least 15.0 credits and completion of the requirements for the Major Program in History; written permission must be obtained from the instructor in the previous session.
Exclusion: (HIS497Y), HIS498H, HIS499H, HIS499Y

HISD04H3 Missionaries and Converts in the Early Modern World
A seminar exploring how early modern people thought about and practiced community, belief, and ritual. We will relate conversion to processes of empire building, and examine whether the "globalization of Christianity" is a useful concept through which to understand the experiences of missionaries and converts from 1500 to 1800.
0.50 pre-1800 credit
Transnational Area
Prerequisite: HISB62H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD05H3 Between Two Worlds? Translators and Interpreters in History
A seminar exploring the social history of translators, interpreters, and the texts they produce. Through several case studies from Ireland and Istanbul to Québec, Mexico City, and Goa, we will ask how translators shaped public understandings of "self" and "other," "civilization" and "barbarity" in the wake of European colonization.
Transnational Area
Prerequisite: 1.0 credits, at or above the B-level, in History/GAS/IEE/CLA
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD06H3 Global History of Crime and Punishment since 1750
An exploration of the global problem of crime and punishment. The course investigates how the global processes of colonialism, industrialization, capitalism and liberalization affected modern criminal justice and thus the state-society relationship and modern citizenry in different cultures across time and space.
HISD30H3 Gendering America
The history of gender in the United States from the era of exploration to the present day. The changing social roles of men and women and the evolving constructions of femininity and masculinity. Particular topics include: work, family, sexuality, and state policy.
United States and Latin America Area
Prerequisite: [HISB30H3 & HISB31H3]
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD31H3 Thinking of Diversity: Perspectives on American Pluralisms
A seminar exploring the evolution of American thinking about diversity -- ethnic, religious, and regional -- from colonial-era defenses of religious toleration to today's multiculturalism. Participants will consider pluralist thought in relation to competing ideologies, such as nativism, and compare American pluralisms to formulations arrived at elsewhere, including Canada.
Transnational Area
Prerequisite: [HISB30H3 & HISB31H3]
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD34H3 Topics in American Social and Cultural History
This fourth-year seminar is funded by the Canada Research Chair in Urban History and is taught by an advanced graduate student in American history. The course, with topics varying from year to year will focus on major themes in American social and cultural history, such as, women's history, labour history, and/or the history of slavery and emancipation.
United States and Latin America Area
Prerequisite: HISB30H3 & HISB31H3
Enrolment Limits: 15

HISD35H3 The Politics of American Immigration, 1865- present
A seminar that puts contemporary U.S. debates over immigration in historical context, tracing the roots of such longstanding controversies as those over immigration restriction, naturalization and citizenship, immigrant political activism, bilingual education and "English-only" movements, and assimilation and multiculturalism. Extensive reading and student presentations are required.
United States and Latin America Area
Prerequisite: HISB30H3 & HISB31H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD36H3 From New Deal to New Right: American Politics since 1933
The most striking development in U.S. politics in the last half century has been the rebirth and rise to dominance of conservatism. This seminar examines the roots of today's conservative ascendancy, tracing the rise and fall of New Deal liberalism and the subsequent rise of the New Right.
United States and Latin America Area
Prerequisite: HISB30H3 & HISB31H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD40H3 From New Deal to New Right: American Politics since 1933
This course introduces students to the methods and practice of the study of local history, in this case the history of Scarborough. This is a service learning course that will require a commitment to working and studying in the classroom and the community as we explore forms of public history.
Canadian Area
Prerequisite: 4.0 credits in History
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD41H3 Canadian Settler Colonialism in Comparative Context
A seminar on Canadian settler colonialism in the 19th and 20th centuries that draws comparisons from the United States and elsewhere in the British Empire. Students will discuss colonialism and the state, struggles over land and labour, the role of race, gender, and geography in ideologies and practices of colonial rule, residential schools, reconciliation and decolonization.
Prerequisite: HISB40H3 or HISB41H3
Enrolment Limit: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD42H3 Selected Topics in Canadian Women's History
Weekly discussions of assigned readings. The course covers a broad chronological sweep but also highlights certain themes, including race and gender relations, working women and family economies, sexuality, and women and the courts. We will also explore topics in gender history, including masculinity studies and gay history.
Canadian Area
Prerequisite: Any credit in Canadian history
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD43H3 From New Deal to New Right: American Politics since 1933
A seminar on Cold War Canada that focuses on the early post-war era and examines Canadian events, developments, experience within a comparative North American context. Weekly readings are organized around a particular theme or themes, including the national insecurity state; reds, spies, and civil liberties; suburbia; and sexuality.
Canadian Area
Prerequisite: HISB41H3 & at least one other B- or C-level credit in History
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

HISD44H3 Nearby History: The Method and Practice of Local History
A seminar on Cold War Canada in Comparative Contexts
A seminar study of the history of the peoples of southern Africa, beginning with the hunter-gatherers but concentrating on farming and industrializing societies. Students will consider pre-colonial civilizations, colonialism and white settlement, slavery, the frontier, the mineral revolution and the South African War. Extensive reading and student presentations are required.
Africa and Asia Area
Prerequisite: HISB50H3 or HISB51H3 or HISC55H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD51H3 Southern Africa: Colonial Rule, Apartheid and Liberation**
A seminar study of southern African history from 1910 to the present. Students will consider industrialization in South Africa, segregation, apartheid, colonial rule, liberation movements, and the impact of the Cold War. Historiography and questions of race, class and gender will be important. Extensive reading and student presentations are required.
Africa and Asia Area
Prerequisite: HISB51H3 or HISD50H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD52H3 East African Societies in Transition**
A seminar study of East African peoples from late pre-colonial times to the 1990's, emphasizing their rapid although uneven adaptation to integration of the region into the wider world. Transitions associated with migrations, commercialization, religious change, colonial conquest, nationalism, economic development and conflict, will be investigated. Student presentations are required.
Africa and Asia Area
Prerequisite: HISB50H3 or HISB51H3 or HISC55H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD56H3 'Coolies' and Others: Asian Labouring Diasporas in the British Empire**
“Coolie” labourers formed an imperial diaspora linking South Asia and China to the Caribbean, Africa, the Indian Ocean, South-east Asia, and North America. The long-lasting results of this history are evident in the cultural and ethnic diversity of today's Caribbean nations and Commonwealth countries such as Great Britain and Canada.
Africa and Asia Area
Same as GASD56H3
Prerequisite: 8.0 credits, of which at least 2.0 credit should be at the B- or C-level in Modern History
Exclusion: GASD56H3
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD58H3 Culture, Politics, and Society in Late Imperial China**
A study of major cultural trends, political practices, social customs, and economic developments in late imperial China (1400-1911) as well as their relevance to modern and contemporary China. Students will read the most recent literature and write a substantive research paper.
0.5 pre-1800 credit
Africa and Asia area
Same as GASD58H3
Prerequisite: 8.0 credits including at least GASA01H3 or HISB58H3
Exclusion: GASD58H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD59H3 Law and Society in Chinese History**
A seminar course on Chinese legal tradition and its role in shaping social, political, economic, and cultural developments, especially in late imperial and modern China.

Topics include the foundations of legal culture, regulations on sexuality, women's property rights, crime fictions, private/state violence, laws of ethnicities, prison reforms and modernization.
0.5 pre-1800 credit
Africa and Asia Area
Same as GASD59H3
Prerequisite: At least 8.0 credits completed, or [HISB58H3 or GASB58H3].
Exclusion: GASD59H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD60H3 Travelling and Travel-Writing from the Middle Ages to the Early Modern Period**
The development of travel and travel narratives before 1800, and their relationship to trade and colonization in the Mediterranean and beyond. Topics include: Marco Polo, pilgrimage and crusading, the history of geography and ethnography. Extensive reading, oral presentations, and a final paper based on research in primary documents are required.
0.50 pre-1800 credit
Transnational Area
Prerequisite: HISB62H3 or HISC60H3 or HISC65H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD63H3 The Crusades: I**
Modern interpretations of the Crusades will be investigated in the broad context of Western expansion into the Middle East (1099-1204), Spain and southern Europe, and, North-Eastern Europe. Also considered will be the Christian Military Orders, the Mongols and political crusades within Europe itself.
0.50 pre-1800 credit
Medieval Area
Prerequisite: HISB60H3 & HISB61H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

**HISD64H3 The Crusades: II**
An intensive study of the primary sources of the First through Fourth Crusades, including works by Eastern and Western Christian, Arab and Jewish authors. The crusading period will be considered in terms of Western Christian expansion into the Middle East, Spain and Northern Europe in the 11th through 13th centuries.
0.50 pre-1800 credit
Medieval Area
Prerequisite: HISB60H3 & HISB61H3
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies
The following courses may be used to fulfill History Program requirements. (see the Classical Studies section of this Calendar for full descriptions.) Pre-1800 courses and Ancient World Area:

- CLAB05H3 History and Culture of the Greek World
- CLAB06H3 History and Culture of the Roman World
- CLAC05H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
- CLAC24H3 Multiculturalism and Cultural Identities in the Greek and Roman Worlds
- CLAD05H3 Water Management in the Ancient Mediterranean World

The following courses may be used to fulfill History Program requirements (see the Global Asia Studies section of this Calendar for full description.): Africa and Asia Area

- GASA01H3 Introducing Global Asia and its Histories
- GASC50H3 Comparative Studies of East Asian Legal Culture

IEEC41H3 Themes in Translation and Cultural Mediation

This course may be used to fulfill History Program requirements. (See the Intersections, Exchanges, and Encounters in the Humanities section of this Calendar for full description.) Transnational Area

**Humanities**

**Faculty List**

E. Khoo, B.Sc. Ed. (USM), M.A. TESOL (Reading), Ph.D. (USQ), Senior Lecturer
M. Petit, M.A., Ph.D. (Colorado), Lecturer

As a broad and diverse collection of disciplines, the Humanities examine how we construct our aesthetic, intellectual, emotional, ethical, social, and political worlds, and they look comparatively at the differences in such constructions in different times and places, and for different people. The Humanities thus study human culture in all of its rich diversity while also seeking to understand the ways in which humans are interconnected.

As an approach to knowledge, the Humanities rely on analytic, critical, inductive, interpretive and evaluative methods of inquiry that are markedly distinct from the empirical methods of the natural and social sciences. By focusing on the subjective constructions of the world around us as forms of identity and human expressions, study in the Humanities helps us better understand what it means to be human.

**HUMA01H3 Exploring Key Questions in the Humanities**

Academic study in the Humanities is distinguished by its critical and historical approaches to text, image, and sound. This course introduces students to key questions through lectures and readings, performances, and small group discussions. Students experience the dynamism and diversity of the Humanities and humanistic inquiry while refining their critical thinking and communication skills. HUMA01H3 is a writing intensive course that offers students regular constructive feedback.

Breadth Requirement: Arts, Literature & Language

**HUMA02H3 Inquiry and Reasoning in the Humanities**

A companion course in HUMA01H3, JUMA02H3 furthers students’ knowledge of humanistic inquiry through an investigation and application of various research methods and approaches, including ethnographic, visual and archival, and qualitative and quantitative. Students develop critical inquiry and reasoning skills including locating, collecting and learning from data, analyzing evidence and assertions, and communicating results within a Humanities context.

Prerequisite: HUMA01H3
Exclusion: (HUMB11H3)
Breadth Requirement: History, Philosophy & Cultural Studies

**HUMD91H3**

**HUMD92H3**

**HUMD93Y3 Supervised Readings**

Independent study of an advanced and intensive kind, under the direction of a faculty member. The material studied should bear some significant relation to the student's previous work, and should differ significantly in content and/or concentration from topics offered in other courses. Students are advised that they must obtain consent from the supervising instructor before registering for these courses. The student should submit to the instructor a statement of objectives and proposed content for the course; this should be done by 15 April for 'F' and 'Y' courses and by 1 December for 'S' courses. If the proposal is approved, two faculty members from relevant disciplines will supervise and evaluate the work.

Prerequisite: Three full credits at the B-level in the Department of Humanities.
Humanities and Social Sciences Co-operative

Co-op Contact: askcoop@utsc.utoronto.ca

Co-operative Programs are enrichment programs designed to integrate related, practical experience with academic studies. All co-op programs are either Specialist or Major Programs and may be taken only as part of a four-year degree. Major Co-op Programs must be combined with another Major program. The co-op credits associated with the successful completion of work-term requirements are additional to the 20.0 academic credits required for a degree. For this reason, some co-op programs may take up to five years to complete. No student may be enrolled in more than one co-op program and all co-op students must be registered at U of T Scarborough in order to maintain their co-op status.

The Humanities and Social Sciences Co-operative Program allows students to combine their chosen humanities or social sciences program with work experience that draws upon the knowledge and skills acquired during their studies, and is applicable to future employment prospects. For a complete list of available programs please consult the Guide to Programs & Courses Offered in the Calendar. Programs in Visual and Performing Arts and in International Development Studies are not eligible for the Humanities and Social Sciences Co-op Program.

Notes:
1. For information on the Specialist (Co-operative) Program in Arts Management, which operates separately from the Humanities and Social Sciences Co-operative Program, please see the Visual and Performing Arts section of this Calendar.
2. For information on the Specialist (Co-operative) Program in International Development Studies (B.A.), which operates separately from the Humanities and Social Sciences Co-operative Program, please see the International Development Studies section of this Calendar.

Admissions
Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.

Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. A POSt in a Humanities or Social Sciences Specialist or Major Program is required, plus a cumulative GPA of at least 2.5.

Program Requirements

Overview
Co-op programs require at least eight four-month work terms of full-time study, and the satisfactory completion of two four-month work terms. Work terms are evaluated by program faculty, the Co-op Office, and the employer, and a grade of CR (credit)/NCR (no credit) is recorded on the transcript. The credits earned for successful work term completion are in addition to the 20.0 credits required for the degree.

Curriculum
Students in Humanities and Social Sciences Co-op follow the course requirements of their chosen Specialist or Major program in the humanities or social sciences. In addition, they will take the Arts & Science Co-op Work Term Preparation Course COPD01H3 (also referred to as NWOW- Navigating the World of Work)- which includes multiple networking sessions, speaker panels and industry engagement activities-during their first year in co-op. Following successful completion of COPD01H3, students are required to take COPD03H3 (also referred to as RC Prep- Recruitment Cycle Preparation)- which covers resumes, cover letters, job interviews, and work term expectations- prior to their first work term.

(Note: COPD01H3 and COPD03H3 are non-credit courses taken over and above a full course load in first year.)

Work Terms
The work terms are an integral part of the co-op curriculum. To be eligible for their first work term, students must be in good standing in their chosen program (with a minimum 2.5 Cumulative Grade Point Average) and have completed at least 9.0 or 10.0 full credits, as specified by the particular program, including a number of program specific credits towards the requirements of their Specialist Program or their Major Program(s). To be eligible for their second work term, students must have received a satisfactory evaluation of their performance and work term report for their first placement.

For information on fees, work terms, and studying in the program, please see the Co-operative Programs section of this Calendar.
International Development Studies

Faculty List
A. Berry, B.A. (Western), M.A. (Yale), Ph.D. (Princeton), Professor Emeritus
M.F. Bunce, B.A. (Sheffield), Ph.D. (Sheffield), Associate Professor Emeritus
A.G. Price, B.Sc. (Wales), M.Sc., Ph.D. (McGill), Associate Professor Emeritus
A.E. Birn, B.A. (Harvard), M.A. (University of Canterbury), Sc.D. (Johns Hopkins), Professor
E.C. Relph, B.A., M.Phil. (London), Ph.D. (Toronto), Professor
J. Teichman, B.A., M.A., Ph.D. (Toronto), Professor
M. Kortenaar, M.A., Ph.D. (Toronto), Professor
S. Bamford, B.A. (Toronto), M.A. (McMaster), Ph.D. (Virginia), Associate Professor
M. Hoffmann, B.S. (Michigan Technological University), Ph.D. (George Washington University), Associate Professor
P-c. Hsiung, B.A. (National Chun-sing), M.A. (Chinese Cultural), M.A., Ph.D. (UCLA), Associate Professor
P. Kingston, B.A. (Toronto), M.A. (London), D.Phil. (Oxford), Associate Professor
C. Norrlof, B.A. (Lund), Ph.D. (Geneva), Associate Professor
S.J. Rockel, M.A., Ph.D. (Toronto), Associate Professor
T. Kepe, B. Agric. (Fort Hare Univ. South Africa), M.Sc. (Guelph), Ph.D. (Univ. Western Cape, South Africa), Associate Professor
G. Fraser, M.A. (Toronto), Ph.D. (Yale), Assistant Professor
M. Hunter, B.A. (Sussex), M.A. (Univ. of Natal), Ph.D. (Univ. California, Berkeley), Assistant Professor
M.E. Isaac, Ph.D. (Toronto), Assistant Professor
R. Isakson, Ph.D. Assistant Professor
K. MacDonald, B.A., M.A. (Waterloo), Assistant Professor
L. Chan, B.A., M.A. (Toronto), Senior Lecturer
Discipline Representative: L. Chan
Undergraduate Counsellor: J. Roopnarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

Our programs provide students with a critical understanding of international development issues through exposure to a variety of academic disciplines, cultures, and, in the case of the specialist co-op program, an overseas work experience in the field of international development. The IDS programs are challenging and intended for bright and self motivated students who are interested in both excelling academically and actively engaging themselves in the pursuit of social justice around such issues as poverty, inequality, and oppression. The students in the IDS program take initiatives, seek empowerment, are driven to solve social and environmental problems, understand the importance of teamwork and coordination, and are responsible and accountable. They have diverse interests that span the social sciences, humanities, and environmental science, all of which is underpinned by a strong sense of social responsibility.

The specific objectives of our IDS programs are to: (1) provide a broad understanding of different development paths and of the complex set of international and domestic factors affecting their success and sustainability; (2) develop sensitivities to and an awareness of the reality in developing countries their cultures, their societies, their political systems, and their position within the global arena; (3) provide skills and opportunities for IDS students to share their experience and insights, to enhance awareness of development issues at the university, and in the broader community, and to promote work on development within Canada, (4) (in the case of specialist co-op program), provide practical work experience in a different culture under the supervision of a Canadian or Southern non-governmental organization (NGO), research institute, multilateral organization, or private partner; and (5) develop partnerships with individuals and organizations in the Global South working in international development.

There are three IDS programs offered: a specialist (non-co-op), a specialist co-op and a major.

As a way of enhancing the interdisciplinary nature of the IDS programs, students are also encouraged to consider complementing their particular program in IDS with a parallel program in a related discipline. For example, those doing a major or a minor in IDS might consider a parallel major or minor in any one of environmental sciences, economics, geography, sociology, anthropology, and political science. While not required for graduation, specialist students (co-op or non-co-op) are also encouraged to consider fulfilling the requirements for a major program in a related discipline alongside their specialist IDS program. For details about how these joint programs can be worked out, please contact the IDS Supervisor of Studies.

Guidelines for 1st year course selection
Students intending to complete any of the above IDS programs should include the following required courses in their first year selection: ECMA01H3, ECMA05H3, EESA01H3 and IDSB02H3. Other useful related (but not required) first year courses include: ANTA02H3, GGRA02H3, HLTA01H3, and POLA90H3. Students should also be careful to make sure that they take the appropriate prerequisites for all courses and programs they decide to pursue.
SPECIALIST PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (ARTS)

Program Requirements
This program requires 13.0 full credits of which at least 6.0 must be at the C- or D-level including at least 1.0 at the D-level.

1. Introduction to International Development Studies (2.0 full credits as follows)
   IDSA01H3 Introduction to International Development Studies
   [ECMA01H3 Introduction to Microeconomics or
    ECMA04H3 Introduction to Microeconomics: A Mathematical Approach]
   [ECMA05H3 Introduction to Macroeconomics or
    ECMA06H3 Introduction to Macroeconomics: A Mathematical Approach]
   EESA01H3 Introduction to Environmental Science

2. Core courses in International Development (3.5 full credits as follows)
   IDSB01H3 Political Economy of International Development
   IDSB02H3 Development and Environment
   IDSB04H3 International Health Policy Analysis
   IDSB06H3 Equity, Ethics and Justice in International Development
   POLB90H3 Comparative Development in International Perspective
   POLB91H3 Comparative Development In Political Perspective
   IDSD02H3 Supervised Research in International Development

3. Methods for International Development Studies (1.5 full credits as follows)
   IDSC04H3 Project Management I
   0.5 FCE in Statistics/Quantitative Methods (one of ANTC35H3, ECMB11H3, GGRA30H3, SOCB06H3, PSYB07H3 & STAB22H3)
   0.5 FCE in Qualitative Methods (one of ANTB19H3, GGRB02H3, SOCB05H3, (HLTA10H3), POLC78H3).

4. Specialized Courses: Approaches to International Development (6.0 full credits)
   A minimum of 2.0 full credits must be chosen from two different clusters below for a total of 4.0 full credits. The other 2.0 full credits may be selected from any of the courses listed below, and IDSC07H3, IDSC10H3, IDSD14H3 and IDSD15H3 may also be counted towards the completion of this requirement.

   Media and Development
   GASC40H3 Chinese Media and Politics
   GASC41H3 Media and Popular Culture in East and Southeast Asia
   IDSB10H3 Knowledge and Communication for Development
   IDSC08H3 Media and Development
   MDSB05H3 Media and Globalization
   MDSB61H3 Critical Approaches to Digital Media
   SOCC08H3 Gender and Information Technology
   SOCC44H3 Media and Society

   Culture and Society
   ANTB19H3 Ethnography and the Comparative Study of Human Societies
   ANTB20H3 Culture, Politics and Globalization
   ANTB64H3 The Anthropology of Food: Consuming Passions
   ANTC10H3 Anthropological Perspectives on Development
   ANTC34H3 The Anthropology of Transnationalism
   (ANTC55H3) Muslim Societies
   ANTC66H3 Anthropology of Tourism
   DTSB01H3 Diaspora and Transnationalism Studies I
   DTSB02H3 Diaspora and Transnationalism Studies II
   HISB51H3 Twentieth Century Africa
   HISB57H3 Sub-Continental Histories: South Asia in the World
   (HISC53H3) Topics in Asian History
   HISC55H3 War and Society in Modern Africa
   IDSC08H3 Media and Development
   SOCC25H3 Ethnicity, Race and Migration
   SOCC34H3 Migrations & Transnationalisms

   Economics of Development
   ANTC19H3 Producing People and Things: Economics and Social Life
   ECMB36H3 Economic Aspects of Public Policy
   ECMB68H3 Comparative Economic Systems
   ECMC66H3 Economic Development
ECMC67H3 Development Policy
IDSC12H3 Economics of Small Enterprise and Micro-Credit
IDSC14H3 The Political Economy of Food

Environment and Land Use
ANTB01H3 Political Ecology
EESB16H3 Feeding Humans - the Cost to the Planet
EESB17H3 Hydro Politics and Transboundary Water Resources Management
FOR201H Conservation of Tropical and Subtropical Forests
GGRC44H3 Environmental Conservation and Sustainable Development
GGRC10H3 Urbanization and Development
(GGRC20H3) Issues in Rural Development
GGRC22H3 Political Ecology Theory and Application
GGRC25H3 Land Reform and Development

Gender and Health
ANTC14H3 Feminism and Anthropology
ANTC15H3 Genders and Sexualities
ANTC61H3 Medical Anthropology: Illness and Healing in Cultural Perspective
GGRB28H3 Geographies of Disease
GGRD10H3 Health and Sexuality
HLTA01H3 Plagues and Peoples
HLTC02H3 Women and Health: Past and Present
HMB303H Global Health and Human Right
IDSC11H3 Issues in International Health
POLC94H3 Globalization, Gender and Development
WSTC10H3 Women and Development
WSTC11H3 Applied Study in Women and Development

Politics and Policy
IDSC17H3 Development, Citizen Action and Social Change in the Global South
POLB80H3 Introduction to International Relations
POLB81H3 Global Issues and Governance
POLC87H3 International Cooperation and Institutions
POLC88H3 The New International Agenda
POLC90H3 Development Studies: Political and Historical Perspectives
POLC91H3 Latin America: Dictatorship and Democracy
POLC96H3 State Formation and Authoritarianism in the Middle East
POLC97H3 Protest Politics in the Middle East
POLC99H3 Latin America: Politics of the Dispossessed
POLD88H3 Exploring the New International Agenda
POLD90H3 Public Policy and Human Development in the Global South
POLD94H3 Selected Topics on Developing Areas

SPECIALIST (CO-OPERATIVE) PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (ARTS)
Co-op Contact: askcoop@utsc.utoronto.ca
The Co-operative Program in International Development Studies at University of Toronto Scarborough, is a five year undergraduate Program which aims to provide students with a critical understanding of international development issues through exposure to a variety of academic disciplines and to another culture. The Program combines interdisciplinary academic study in the social and environmental sciences and humanities with a practical work experience in a developing country. IDS students graduate with an Honours B.A. with a Specialist certification in International Development Studies. Note: The science version of the Specialist (Co-operative) Program in International Development Studies is currently under review and students interested in this option should consult with the Program Supervisor.

Program Admission
Enrolment in the Program is limited. Interviews are normally held from March until May for students who pass the initial screening. Admissions are granted on the basis of the applicants' academic performance, background in relevant subjects, language skills, experience or interest in international development studies and work. For information on fees and status in the Program, please see the Co-operative Programs section of this Calendar. Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar. Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits and a cumulative GPA of at least 2.5. An interview is required.
Work Placement
This Program requires twenty courses (four years) of study and one work term of eight to twelve months in duration. The work term will normally begin between April and September of the third year. The IDS work term is an integral part of the co-op curriculum and is designed to provide students with practical hands on experience in a developing country. The majority of work terms are with Canadian NGOs, research institutes or private sector consulting firms. The location of placements will vary according to each student's disciplinary and regional preferences and abilities, the availability of positions, and the practicability and safety of the area. Placement employers are asked to cover the living allowance of the student. Those students who choose to carry out their placement with no funding will be asked to finance the living allowance themselves.
Students are required to submit progress reports every 2 months and begin work on a major research project. To be eligible for placement, students must have completed 14.5 full credits including 12.0 IDS credits. These 12 must include IDSC01H3, IDSC04H3 plus 9.5 other credits from Requirements 1 through 4. For information about status in the co-op program, fees, and regulations, please see the Co-operative Programs section of this Calendar. Students who successfully complete all requirements associated with a work term are awarded credit, these credits being additional to the 20.0 normally required for the degree. Work terms are evaluated by program faculty, the co-op office, and the employer, and a grade of CR (credit)/NCR (no credit) is recorded on the transcript.

IDS Co-op Tutorial and Pre-Departure Orientation
Students participate in a non-credit co-op tutorial, commencing at the end of the year in which they complete 10 credits, and continuing through the following year (the pre-placement year). Presentations, group exercises and individual assignments prepare students for the placement experience.
There are mandatory sessions on cross-cultural understanding, health and safety issues on placement, researching for the IDSD01Y3 thesis, and other key topics. A weekend retreat with the fifth years (who have returned from placement) provides the opportunity for sharing of first-hand experience.

Program Requirements
This program requires 15.0 full credits, of which at least 6.0 must be at the C- or D-level including at least 1.0 at the D-level.
Students must complete requirements 1-4 of the requirements for the Specialist (Non-co-op B.A.) Program in International Development Studies above, except for IDSD02H3, plus the following:
- 1.0 full credit in a second language
- IDSC01H3 Research Design for Development Fieldwork (must be taken prior to co-op placement)
- IDSD01Y3 Post-placement Seminar and Thesis

SPECIALIST PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (SCIENCE)
Program Requirements:
This program requires 14.0 credits of which at least 6.0 must be at the C- or D-level including at least 1.0 at the D-level.
1. Introduction to International Development Studies (2.0 credits)
   IDSA01H3 Introduction to International Development Studies
   [ECMA01H3 Introduction to Microeconomics or ECMA04H3 Introduction to Microeconomics: A Mathematical Approach]
   [ECMA05H3 Introduction to Macroeconomics or ECMA06H3 Introduction to Macroeconomics: A Mathematical Approach]
   EESA01H3 Introduction to Environmental Science

2. Core courses in International Development (3.5 credits)
   IDSB01H3 Political Economy of International Development
   IDSB02H3 Development of Environment
   IDSB04H3 International Health Policy Analysis
   IDSB06H3 Equity, Ethics and Justice in International Development
   POLB90H3 Comparative Development in International Perspective
   POLB91H3 Comparative Development in Political Perspective
   IDSD02H3 Supervised Research in International Development

3. Methods for International Development Studies (1.5 credits)
   IDSC04H3 Project Management I
   STAB22H3 Statistics I
   and
   0.5 FCE in Qualitative Methods (one of ANTB19H3, GGRB02H3, SOCB05H3, (HTLA10H3)

4. Specialized Courses: Core (3.0 credits)
   BIOA01H3 Life on Earth: Unifying Principles
   BIOA02H3 Life on Earth: Form, Function and Interactions
   CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
[(MAT20H3) Calculus A or MAT30H3 Calculus I for Biological and Physical Sciences] [PHYA10H3 or PHYA11H3 Introduction to Physics I A or IB]

5. 1.5 credits from:
   - EESB03H3 Principles of Climatology
   - EESB04H3 Principles of Hydrology
   - EESB05H3 Principles of Soil Science
   - EESB15H3 Earth History
   - EESB16H3 Feeding Humans- The Cost to the Planet

6. 0.5 credits from:
   - BIOB50H3 Ecology
   - EESB02H3 Principles of Geomorphology
   - EESB17H3 Hydro Politics and Transboundary Water Resource Management
   - PSCB57H3 Introduction to Scientific Computing
   - CHMB55H3 Environmental Chemistry

7. 2.0 credits from C- and D-level EES courses, with at least 0.5 credit at the D-level, from the following:
   - EESC04H3 Biodiversity and Biogeography
   - EESC07H3 Groundwater
   - EESC13H3 Environmental Impact Assessment and Auditing
   - EESC20H3 Geochemistry
   - EESC21H3 Urban Environmental Problems of the Greater Toronto Area
   - EESD02H3 Contaminant Hydrogeology
   - EESD06H3 Climate Change Impact Assessment
   - EESD11H3 Process Hydrology
   - EESD15H3 Cleaning Up Our Mess: Remediation of Terrestrial and Aquatics Environments

SPECIALIST(CO-OPERATIVE) PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (SCIENCE)
The Co-operative version of the Specialist Program in International Development (B.Sc.) is currently under review and students interested in this option should consult the Program Supervisor.

MAJOR PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (ARTS)
Program Requirements
This program requires 8.0 full credits of which at least 2.0 must be at the C- or D-level.

1. Introduction to International Development Studies (0.5 full credits)
   - IDS01H3 Introduction to International Development Studies

2. Core courses in International Development (1.5 full credits)
   1.5 full credits from the following:
   - IDS01H3 Political Economy of International Development
   - IDS02H3 Development and Environment
   - IDS04H3 International Health Policy Analysis
   - IDS06H3 Equity, Ethics and Justice in International Development
   - POLB90H3 Comparative Development in International Perspective
   (Students wishing to take IDS01H3 and IDS02H3 should be aware that there are A-level prerequisites for these courses.)

3. Methods for International Development Studies (1.5 full credits)
   - IDS04H3 Project Management I
   - 0.5 credits in quantitative/statistical methods (one of ANT35H3, ECMB11H3, GGRA30H3, PSYB07H3, SOCB06H3 & STAB22H3)
   - 0.5 credits in qualitative methods (one of ANTB19H3, GGRB02H3, SOCB05H3, (HLTA10H3), POLC78H3)

4. Specialized Courses (4.5 full credits)
   - 4.5 credits from the courses listed in Requirement 4 of the B.A. version of the Specialist Program in IDS with at least 1.0 credit from each of TWO of the clusters.

MAJOR PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (SCIENCE)
The science version of the Major Program in International Development Studies is currently under review and enrolment in it has been suspended indefinitely. Students who first enrolled at UTSC prior to the 2010 Summer Session should refer to the 2009/2010 UTSC Calendar.
INTERFACULTY COMBINATION PROGRAM IN INTERNATIONAL DEVELOPMENT AND ENVIRONMENTAL STUDIES

The Interfaculty Combination Program in International Development & Environmental Studies is under review and enrolment in it has been suspended indefinitely. Students who are currently enrolled in it will be able to complete it.

MINOR PROGRAM IN INTERNATIONAL DEVELOPMENT STUDIES (ARTS)

The Minor Program in International Development Studies has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it.

IDS01H3 Introduction to International Development Studies

- History, theory and practice of international development, and current approaches and debates in international development studies. The course explores the evolution of policy and practice in international development and the academic discourses that surround it. Lectures by various faculty and guests will explore the multi-disciplinary nature of international development studies. This course is a prerequisite for all IDS B-level courses.
- Breadth Requirement: Social & Behavioural Sciences

IDS02H3 Experiencing Development in Africa

- This experiential learning course allows students to experience first-hand the realities, challenges, and opportunities of working with developmental organizations in Africa. The goal is to allow students actively engage in research, decision-making, problem solving, partnership buildings, and fundraising, processes that are the key elements of development work.
- Same as AFSA01H3
- Prerequisite: AFSA01H3 and IDS01H3
- Exclusion: AFSA03H3
- Enrolment Limit: 25
- Breadth Requirement: Social & Behavioural Sciences

IDSB01H3 Political Economy of International Development

- Introduces students to major development problems, focusing on international economic and political economy factors. Examines trade, aid, international institutions such as the World Bank, the IMF and the WTO. Examines both conventional economic perspectives as well as critiques of these perspectives. This course can be counted for credit in ECM Programs.
- Prerequisite: [ECMA01H3 & ECMA05H3] or [ECMA04H3 & ECMA06H3] & IDS01H3
- Exclusion: ECO230Y
- Enrolment Limits: 170
- Breadth Requirement: Social & Behavioural Sciences

IDSB02H3 Development and Environment

- The environmental consequences of development activities with emphasis on tropical countries. Environmental change in urban, rainforest, semi-arid, wetland, and mountainous systems. The influences of development on the global environment; species extinction, loss of productive land, reduced access to resources, declining water quality and quantity, and climate change.
- Prerequisite: IDS01H3 and EESA01H3
- Enrolment Limits: 170
- Breadth Requirement: Social & Behavioural Sciences

IDSB04H3 International Health Policy Analysis

- This course explores institutional, economic, social, epidemiological, ideological, and political forces in the field of international health. Key themes include political economy of health and development; distribution of disease; social determinants of health; financing and organization of health systems; international health agencies; role of civil society, and globalization and health.
- Prerequisite: 5.0 full credits including IDS01H3
- Breadth Requirement: Social & Behavioural Sciences

IDSB06H3 Equity, Ethics and Justice in International Development

- What constitutes equitable, ethical as well as socially and environmentally just processes and outcomes of development? This course explores these questions with particular emphasis on their philosophical and ideological foundations and on the challenges of negotiating global differences in cultural, political and environmental values in international development.
- Prerequisite: IDS01H3 and students registered in an IDS program before 2010/2011 will be admitted with permission of instructor.
- Breadth Requirement: Social & Behavioural Sciences

IDSB10H3 Knowledge and Communication for Development

- Examines in-depth the roles of information and communication technology (ICT) in knowledge production, and their impact on development. Do new forms of social media make communication more effective, equitable, or productive in the globalized world? How has network media changed governance, advocacy, information flow, and knowledge exchange, and what do these mean for development?
- Exclusion: (ISTB01H3)
- Enrolment Limits: 88 (preference will be given in the first round of registration to students enrolled in IST programs).
- Breadth Requirement: Social & Behavioural Sciences

IDSC01H3 Research Design for Development Fieldwork

- Examines research design and methods appropriate to development fieldwork. Provides 'hands on' advice (practical, personal and ethical) to those preparing to enter "the field"; or pursuing development work as a career. Students will prepare a research proposal as their main course assignment.
- Prerequisite: IDS01H3 & 9.0 full credits in total including at least 6.0 credits satisfying Requirements 1 through 4 of the Specialist Co-op program
- Enrolment Limits: 20. Limited to students enrolled in the Specialist Coop Program in IDS. Students in other IDS programs may be admitted with permission of instructor subject to the availability of spaces.
- Breadth Requirement: Social & Behavioural Sciences

IDSC04H3 Project Management I

- Studies the phases of the project management cycle with emphasis on situational analysis and identification of needs, project implementation, project monitoring and evaluation.
Examines basic organizational development, the role of Canadian non-governmental organizations engaged in the delivery of development assistance as well as with CIDA’s policies and practices. Prerequisite: IDSA01H3 & IDSB01H3 & IDSB02H3
Enrolment Limits: Restricted to students in the IDS specialist and major programs.
Breadth Requirement: Social & Behavioural Sciences

IDSC06H3 Directed Research on Canadian Institutions and International Development
Introduces students to the role of Canadian institutions (both non-government organizations and private agencies) working in international development. Students taking this course will arrange, in consultation with the instructor, to work (usually as a volunteer) in a Canadian institution. They will write a major research paper related to some aspect of their experience. The course will use and apply some of the techniques and skills taught in IDSC04H3. Students must obtain consent from the Supervisor of Studies before registering for this course.
Prerequisite: IDSA01H3 & IDSB01H3 & IDSB02H3 & permission of the instructor
Corequisite: IDSC04H3 recommended

IDSC07H3 Project Management II
A case study approach building on Project Management I. Examines: the art of effective communication and negotiation, visioning, participatory and rapid rural appraisal; survey design and implementation; advanced financial management and budgeting; basic bookkeeping and spreadsheet design; results based management; environmental impact assessments; cross-cultural effectiveness; and gender and development.
Prerequisite: IDSA01H3 & IDSC04H3
Enrolment Limits: Limited to students in IDS Specialist and Major programs. Other students may be admitted with permission of instructor. Students in the Co-op program must take this course prior to their placement year.
Breadth Requirement: Social & Behavioural Sciences

IDSC08H3 Media and Development
Critical perspectives on the effects of traditional and ‘new’ media on development policy and practice. The course examines the increasingly significant role the media plays in the development process, the ways in which media-generated images of development and developing countries affect development policy and the potential of ‘new’ media for those who are marginalized from the development process.
Prerequisite: IDSA01H3 & IDSC04H3
Enrolment Limits: 35
Breadth Requirement: Social & Behavioural Sciences

IDSC10H3 Topics in International Development Studies
Contents to be determined by instructor.
Prerequisite: IDSA01H3 & IDSB01H3 & IDSB02H3

IDSC11H3 Issues in International Health
Key international health issues are explored in-depth in three learning phases. We start with a reading and discussion seminar on health inequities, globalization, and health reform. Next, students develop group projects designed to raise awareness around particular international health problems.

The third phase involves individual research projects and class presentations.
Prerequisite: IDSA01H3 & IDSB04H3
Enrolment Limits: 35
Breadth Requirement: Social & Behavioural Sciences

IDSC12H3 Economics of Small Enterprise and Microcredit
Considers the role of micro- and small/medium enterprise in the development process, as compared to the larger firms. Identifies the role of smaller enterprises in employment creation and a more equitable distribution of income. Examines policies which can contribute to these outcomes, including micro-credit. This course can be counted for credit in ECM Programs.
Prerequisite: IDSA01H3 & [ECMA01H3 & ECMA05H3] or [ECMA04H3 & ECMA06H3]
Exclusion: (IDSB05H3) Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

IDSC14H3 The Political Economy of Food
Examines how institutions and power relations shape the production and distribution of food, particularly in the global South. The course evaluates competing theories of hunger and malnutrition. It also explores the historical evolution of contemporary food provisioning and evaluates the viability and development potential of alternative food practices.
Prerequisite: IDSB01H3
Enrolment Limit: 35
Breadth Requirement: Social & Behavioural Sciences

IDSC17H3 Development, Citizen Action and Social Change in the Global South
Explores the question of citizenship through theories of citizen participation and action in dialogue with a wide range of recent empirical case studies from the Global South. Going beyond formal rights and status, the course looks at deeper forms of political inclusion and direct participation in decision-making on political and policy issues.
Prerequisite: IDSA01H3 and IDSB01H3 Enrolment Limit: 30
Breadth Requirement: Social & Behavioural Sciences

IDSD01Y3 Post-placement Seminar and Thesis
Normal enrolment in this course will be made up of IDS students who have completed their work placement. Each student will give at least one seminar dealing with their research project and/or placement. The research paper will be the major written requirement for the course, to be submitted no later than mid-March. The course will also include seminars by practicing professionals on a variety of development topics.
Prerequisite: IDSA01H3 & students must have completed the first four years of the IDS Specialist Co-op Program or its equivalent and have completed their placement. Also, permission of the instructor is required.

IDSD02H3 Supervised Research in International Development
An independent studies course open only to students in the Specialist Non-co-op Program in IDS. Students will carry out a research project and write a research paper under the individual supervision of a faculty member. Students will present the results of their research in a conference at the end of the term.
Prerequisite: 15.0 credits including IDSA01H3, completion of
Requirements 1-3 and at least 2.0 credits in Requirement 4 in the Specialist Program. One of the credits from Requirement 4 must be at the C- or D-level. Students with a CGPA of less than 2.5 will not be admitted.

IDSD10H3 Topics in International Development Studies
Contents to be determined by Instructor.
Prerequisite: IDSA01H3, IDSB01H3, IDSB02H3, and at least one other C level course in the Social Sciences.
Exclusions: None
Enrolment Limits: 30

International Studies

Faculty List
E.W. Dowler, A.M. (Harvard), Ph.D. (London School of Economics), Professor
A. Rubinoff, A.B. (Allegheny), M.A., Ph.D. (Chicago), Professor
S. Solomon, B.A. (McGill), M.A., Ph.D. (Columbia), Professor
J. Teichman, B.A., M.A., Ph.D. (Toronto), Professor
P. Kingston, B.A. (Toronto), M.A. (London), D.Phil. (Oxford), Associate Professor
M. Mahtani, B.A. (Dalhousie), Ph.D. (London), Associate Professor
S.J. Rockel, M.A., Ph.D. (Toronto), Associate Professor
K. Liddle, B.A. (Oberlin), M.A. (Auburn), Ph.D. (Emory), Assistant Professor
L. Chan, B.A., M.A. (Toronto), Senior Lecturer

Intersections, Exchanges, Encounters in the Humanities

Faculty List
D.E. Bender, M.A., Ph.D. (New York), Associate Professor
K.A. McLeod, M.A. (McMaster), Ph.D. (McGill), Assistant Professor
A. Paz, B.A. (Queen's), M.A. (Tel Aviv), M.A. (Chicago), Ph.D. (Chicago), Assistant Professor
E.N. Rothman, M.A. (Tel Aviv), Ph.D. (Michigan), Assistant Professor
Program Director: TBD

“Intersections, Exchanges, Encounters, in the Humanities” (IEE) familiarizes students with current, cutting-edge research from across the humanities. IEE courses focus on where different traditions of inquiry intersect, and are taught by professors working in areas such as music, language, history, and beyond whose research steps across traditional boundaries. Students will be able to explore connections between subject areas by taking courses with faculty with diverse approaches and interests. IEE is designed as an advanced companion major meaning that students need to major in another discipline or department as well. The experiential component of IEE will help students understand how the complexity of humanities thought can be applied outside the university. IEE graduates will be superbly equipped for a wide range of future scholarly and professional endeavours. Since students will have
mastered a variety of methodological and research approaches and encountered a rich breadth of subject areas, they will be uniquely qualified for graduate school, teacher’s college, law school, or indeed any undertaking requiring flexibility of mind, creativity of engagement, and the ability to think through and analyze diverse information. IEE’s approach emphasizes language competency, artistic and cultural expression, and experiential learning, and thus also provides an excellent foundation for careers in areas such as government, social activism, and community work. IEE students will be expected to complete both the requirements of the IEE major as well as those of a major or specialist in an established program. Please note the program is currently under review.

**MAJOR PROGRAM IN INTERSECTIONS, EXCHANGES, ENCOUNTERS IN THE HUMANITIES (ARTS)**

*Undergraduate Advisor: 416-287-7184 Email: iee-undergrad-advisor@utsc.utoronto.ca*

The Major Program in Intersections, Exchanges, Encounters in the Humanities is currently under review and new enrolment in it has been suspended indefinitely. Students who enrolled at UTSC prior to the 2012 Summer Session should refer to the 2011/2012 UTSC Calendar.

**IEEB01H3 Human, Inhuman, and Non-Human**

This course examines how the definition of the human is related to science and technology. The topics include the development of media and communications technology, and the intersection of popular culture with new social media and gaming. Required for all IEE majors.

Same as MDSB01H3
Prerequisite: At least 4.0 credits
Exclusion: MDSB01H3
Recommended Preparation: HUMA01H3
Breadth Requirement: History, Philosophy & Cultural Studies

**IEEB02H3 Senses, Sensibility, Sensuality**

This course focuses on how sensual responses acquire and shape meaning and considers the body, sexuality, visuality, taste, purity/pollution, and aurality. Case studies may include food, music, consumption and material culture, or arts. Assignments involve experiential learning. Required for IEE majors.

Prerequisite: At least 4.0 credits
Breadth Requirement: History, Philosophy & Cultural Studies

**IEEB03H3 Time, Story, Perspective**

This course explores key questions about the stories we tell. It examines perceptions of time and space, chronology and geography, truth and myth, narrative genres. Cases may include: translation, travel, epic, song, theatre, and mapping. Assignments include experiential learning. Required for IEE majors.

Prerequisite: At least 4.0 credits
Breadth Requirement: History, Philosophy & Cultural Studies

**IEEC01H3 Theories and Methods in the Study of Society and Culture**

This course introduces students to key themes, texts, and critical methodologies in the study of society and culture, such as phenomenology, ethnography, deconstruction, Marxist theory, feminism, semiotics, queer theory, post modernism and post colonialism. The course will focus on methods employed by scholars across the humanities.

Prerequisite: At least 4.0 credits
Corequisite: IEEB01H3 or IEEB02H3 or IEEB03H3
Breadth Requirement: History, Philosophy & Cultural Studies

**IEEC02H3 History of Animals and People**

An examination of the places of animals in global history. The course examines on-going interactions between humans and animals through hunting, zoos, breeding, and pets and the historical way the divide between humans and animals has been measured. Through animals, people have often thought about what it means to be human.

Same as HISC03H3
Prerequisite: At least 4.0 credits
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B, C or D-level
Exclusion: HISC03H3, HISD03H3
Breadth Requirement: History, Philosophy & Cultural Studies

**IEEC11H3 Perspectives on Languages and Culture I**

How does language shape the way groups and individuals understand art, literature, music, conversation, and everyday action? Combining readings from several fields this course explores the sociocultural practices which language helps to structure. Assignments include experiential learning. Topics will vary with instructor.

Prerequisite: At least 4.0 credits
Corequisite: For IEE students, at least one of IEEB01H3, IEEB02H3 or IEEB03H3. For non-IEE students, at least 1.0 credit in the Humanities or Social Sciences at the B, C, or D-level.
Breadth Requirement: Arts, Literature & Language

**IEEC12H3 Perspectives on Languages and Culture II**

How does language shape the way groups and individuals understand art, literature, music, conversation, and everyday action? Combining readings from a variety of fields this course explores the sociocultural practices which language helps to structure. Topics will vary with instructor.

Prerequisite: At least 4.0 credits
Corequisite: For IEE students, at least one of IEEB01H3, IEEB02H3 or IEEB03H3. For non-IEE students, at least 1.0 credit in the Humanities or Social Sciences at the B, C, or D-level.
Breadth Requirement: Arts, Literature & Language

**IEEC21H3 Media and Popular Culture in East and Southeast Asia**

This course introduces students to media industries and commercial popular cultural forms in East and Southeast Asia. Topics include reality TV, TV dramas, anime and manga, as well as issues such as regional culture flows, global impact of Asian popular culture, and the localization of global media in Asia.

Same as GASC41H3 and MDSC41H3
Prerequisite: Any 4 credits including HUMA01H3
Exclusion: GASC41H3, MDSC41H3, (HUMC54H3)
IEEC22H3 Perspectives on the Globalized and the Transnational II
What does globalization mean? And how can we study it by looking at phenomena such as consumption, mass media, transnational migration, and representations of home and abroad? This course explores this through case studies. Assignments include experiential learning. Topics vary with instructor.
Prerequisite: At least 4.0 credits
Corequisite: For IEE students, at least one of IEEB01H3, IEEB02H3 or IEEB03H3. For non-IEE students, at least 1.0 credits in the Humanities at the B, C, or D-level.
Breadth Requirement: History, Philosophy & Cultural Studies
IEEC31H3 Gender, Health, Science in Transnational Perspective
This course provides an advanced introduction to feminist scholarship on science, health, and technology. It examines a history and culture of modern scientific research, health practice, and technologies in western and non-western societies. Same as WSTC21H3
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B, C or D-level.
Exclusion: WSTC21H3
Enrolment Limits: 50
Breadth Requirement: History, Philosophy & Cultural Studies
IEEC32H3 Gender in East Asian Science and Technology
This course examines how gender issues influence the history and contemporary development of science and technology in East Asian societies, including China, Japan, and Korea. Students will gain a critical perspective on the role of gender in shaping scientific knowledge and technological advancements in the context of East Asia. Same as GASC19H3 and WSTC19H3
Prerequisite: At least 4.0 credits
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B, C or D-level.
Exclusion: GASC19H3 and WSTC19H3
Enrolment Limits: 50
Breadth Requirement: Arts, Literature & Language
IEEC41H3 Themes in Translation and Cultural Mediation I
This course examines how individuals and groups engage in translation, conversion, and the representation of cultural difference. Through case studies it explores how and why boundaries between religions, cultures, languages, and societies have been drawn. Assignments include experiential learning. Topics vary with instructor.
Prerequisite: At least 4.0 credits
Corequisite: For IEE students, at least one of IEEB01H3, IEEB02H3 or IEEB03H3. For non-IEE students, at least 1.0 credits in the Humanities at the B, C, or D-level.
Exclusion: HISD05H3
Breadth Requirement: History, Philosophy & Cultural Studies
IEEC51H3 Old Worlds? Strangers and Foreigners in the Mediterranean, 1200-1700
An exploration of how medieval and early modern societies encountered foreigners and accounted for foreignness, as well as for religious, linguistic, and cultural difference more broadly. Topics include: monsters, relics, pilgrimage, the rise of the university, merchant companies, mercenaries, piracy, captivity and slavery, tourism, and the birth of resident embassies.
Same as HISC60H3
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B, C or D-level.
Exclusion: HISC60H3
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language
IEEC52H3 Environment, Society and Economy in Ptolemaic and Roman Egypt
This course provides an overview of the environmental, social and economic features of Egypt from 332 BC to 642 AD. Same as CLAC05H3, HISC10H3
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B, C or D-level.
Exclusion: CLAC05H3, HISC10H3
Breadth Requirement: History, Philosophy & Cultural Studies
IEEC71H3 Exchanges in Performance and the Arts I
This course investigates the relationship between art forms from the perspective of performance. Topics may include the social role of performance, the body in performance, performing identities, virtual performance, and the impact of technology on the performing body. Assignments include experiential learning. Topics will vary with instructor.
Prerequisite: At least 4.0 credits
Corequisite: For IEE students, at least one of IEEB01H3, IEEB02H3 or IEEB03H3. For non-IEE students, at least 1.0 credits in the Humanities at the B, C, or D-level.
Breadth Requirement: Arts, Literature & Language
IEEC81H3 Issues, Approaches, and Exchanges in Popular Music
An examination of issues in the study of western and non-western popular music and their intersection with other fields of humanistic inquiry. It will explore models of critical analysis and questions surrounding ideology, performance, reception, technology and the relationship of popular music to other media including cyberspace, film and television. Same as VPMC84H3.
Corequisite: 0.5 B-level credit in IEE or 1.0 credit in Humanities, English or Philosophy at the B-, C- or D-level.
Exclusion: VPMC84H3
Breadth Requirement: History, Philosophy & Cultural Studies
IEED01H3 Capstone Seminar in Intersections, Exchanges, Encounters in the Humanities
This course is the capstone course for IEE majors. Though topics will vary from year-to-year, the course will connect the themes, perspectives, and exchanges introduced throughout the program. Students will be expected to complete a lengthy research paper. This course is intended for IEE students in their final year.
Prerequisite: IEEB01H3 & IEEB02H3 & IEEB03H3 & at least 2 C-level IEE courses & restricted to IEE major students
Enrolment Limits: 25
IEED02H3 Experiential Learning Seminar in Intersections, Exchanges, Encounters in the Humanities

This course is the experiential learning course for IEE majors. Students will meet with the instructor to define a program of experiential learning appropriate to their interests and future goals. Projects might include research collaboration with faculty or community work. All students will complete a paper related to their program. This course is intended for IEE students in their final year.
Prerequisite: IEEB01H3 & IEEB02H3 & IEEB03H3 & at least 2 C-level IEE courses & restricted to IEE major students
Enrolment Limits: 25

Journalism

Faculty List
M. Mahtani, B.A. (Dalhousie), Ph.D. (London), Associate Professor
Jeffrey Dvorkin, B.A. Hon. (Alberta), M.A. (Toronto), M. Phil. (London), Lecturer

SPECIALIST (JOINT) PROGRAM IN JOURNALISM (ARTS)

Program Supervisor: J. Dvorkin (416-208-2919) Email: journalism@utsc.utoronto.ca

This program may be taken in fulfillment of the requirements of a four-year (20-credit) Honours B.A. Degree and requires four to five years to complete. In addition to completing the requirements for the degree, students who intend to qualify for a diploma from Centennial College must undertake one additional semester in a field placement and complete a short non-credit course on journalism career management at Centennial.
Courses are taught at both U of T Scarborough and at Centennial College (East York campus). Centennial courses are taken in the third and fourth years of the program. Students must be registered on a full-time basis while at Centennial College. This may include evenings and weekends.

Students must maintain a Cumulative Grade Point Average (CGPA) of 2.0 or higher to remain in the program.

Guidelines for 1st year course selection
Students intending to complete the program should include the following in their first year course selection:
MDSA02H3 and JOUA01H3 & JOUA02H3 and HUMA01H3 & other courses of interest.
The Journalism Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_jo.html

Note: Many of the new media courses codes have changed from MDS to JOU. See course descriptions.

Program Admission
Limited enrolment. Applicants must fill out a joint program application form, which is available online at www.utsc.utoronto.ca/jtprogs

Program Requirements
a. MDSA02H3 History of Media and Technology
   JOUA01H3 & JOUA02H3 Introduction to Journalism I & II
   HUMA01H3 Exploring Key Questions in Humanities
b. JOUB24H3 Journalism in the Age of New Media
   JOUB01H3 Covering Immigration and Transnational Issues
   JOUB02H3 Critical Journalism
   JOUB39H3 Fundamentals of Journalistic Writing
   HUMA02H3 Inquiry and Reasoning in the Humanities
c. Two full credits at the C or D-level, of which at least 1.0 credit is at the D-level.
d. Courses that satisfy the requirements of one Minor Program.

Note: Courses used to meet this requirement may also be applied to Requirements a) through c).

e. Journalism Group I - students will be eligible to enrol in these courses after successfully completing at least 10 full credits at the University of Toronto Scarborough (or permission of the Program Supervisor), including MDSA02H3, JOUA01H3, JOUA02H3, JOUB24H3, JOUB01H3, JOUB02H3, JOUB39H3, HUMA01H3, HUMA02H3.
   *JOUA06H3 Journalism Law and Ethics
   *JOUB11H3 News Reporting
   *JOUB14H3 Journalism Design
   *JOUB18H3 Imaging: Photography for Journalists
f. Journalism Group II - students will be eligible to enrol in these courses after successfully completing Group I above.
   *JOUB03H3 Magazine/Freelance Journalism
   *JOUB05H3 Advanced Interviewing Techniques
   *JOUB10H3 News Laboratory I
   *JOUB17H3 Radio News
   *JOUB20H3 Multiplatform Journalism

Note: Courses used to meet this requirement may also be applied to Requirements a) through c).
g. Journalism Group III - students will be eligible to enrol in these courses after successfully completing Group II above.
   *JOUC13H3 Beat Reporting
Completion of a 15-week field placement and Career Management course are also required to qualify for the diploma from Centennial College. The field placement enables prospective graduates to practice and develop the skills required to work professionally and effectively in journalistic environments. Through individual work and as members of teams, students contribute to the publication of journalistic content within various formats and media platforms.

**JOUA01H3 Introduction to Journalism I**
- An introduction to the social, historical, philosophical, and practical contexts of the media. The course will examine various types of media and the role of the journalist. Students will be introduced to story forms and journalistic skills.
- Media coverage of current issues will be discussed. This course is open only to students in the Journalism Joint Program.
- Exclusion: (MDSA21H3)
- Breadth Requirement: Arts, Literature & Language

**JOUA02H3 Introduction to Journalism II**
- A continuation of JOUA01H3. The course is open only to students in the Journalism Joint Program.
- Prerequisite: (MDSA21H3) or JOUA01H3
- Exclusion: (MDSA22H3)
- Breadth Requirement: Arts, Literature & Language

**JOUA06H3 Journalism Law and Ethics**
- An examination of the key legal and ethical issues facing Canadian journalists, with an emphasis on the practical: what a journalist needs to know to avoid legal problems and develop strategies for handling ethical challenges.
- This course is taught at Centennial College and is open only to students in the Journalism Joint Program.
- Prerequisite: 10 credits including [(MDSA21H3) or JOUA01H3], [(MDSA22H3) or JOUA02H3], [(MDSB26H3) or JOUB01H3], [(MDSB27H3) or JOUB02H3], (HUMB11H3).
- Corequisite: JOUB11H3 & JOUB14H3 & JOUB18H3
- Exclusion: (MDSB04H3)
- Breadth Requirement: History, Philosophy & Cultural Studies

**JOUB01H3 Covering Immigration and Transnational Issues**
- An examination of Canadian coverage of immigration and transnational issues. With the shift in Canada's demographics, media outlets are struggling to adapt to new realities. We will explore how media frame the public policy debate on immigration, multiculturalism, diaspora communities, and transnational issues which link Canada to the developing world.
- This course is open only to students in the Journalism Joint Program.
- Prerequisite: HUMA01H3 & (MDSA21H) or JOUA01H3 & (MDSA22H3) or JOUA02H3
- Exclusion: (MDSB26H3)
- Breadth Requirement: Arts, Literature & Language

**JOUB02H3 Critical Journalism**
- The course examines the representation of race, gender, class and power in the media, traditional journalistic practices and newsroom culture. It will prepare students who wish to work in a media-related industry with a critical perspective towards understanding the marginalization of particular groups in the media.
- The course is open only to students in the Journalism Joint Program.
- Prerequisite: 4.0 credits including HUMA01H3 & [(MDSA21H3) or JOUA01H3] & [(MDSA22H3) or JOUA02H3].
- Exclusion: (MDSB27H3)
- Breadth Requirement: Arts, Literature & Language

**JOUB03H3 Magazine/Freelance Journalism**
- An introduction to developing and selling quality magazine stories for multiformat publication. Students learn techniques for both successful freelancing and magazine staff work. Students learn the importance of finding market niches, winning assignments, and carrying them out professionally.
- Assignments include producing source materials, a query letter and a feature-length story. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.
- Prerequisite: 12 credits, including JOUA06H3 & JOUB11H3 & JOUB14H3 & JOUB18H3
- Corequisite: JOUB05H3 & JOUB10H3 & JOUB17H3 & JOUB20H3
- Breadth Requirement: Arts, Literature & Language

**JOUB05H3 Advanced Interviewing Techniques**
- An advanced course that helps students to polish their interviewing techniques and correct weaknesses in their interviewing style. Students analyze recorded interviews, role-play, critique student interviews and conduct research.
- This is as much a "people" skills course as it is a course in learning how to ask the right questions. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.
- Prerequisite: 12 credits, including JOUA06H3 & JOUB11H3 & JOUB14H3 & JOUB18H3
- Corequisite: JOUB03H3 & JOUB10H3 & JOUB17H3 & JOUB20H3
- Breadth Requirement: Arts, Literature & Language

**JOUB10H3 News Laboratory I**
- Practical experience on "The Observer", an online and printed community newspaper serving Malvern, Highland Creek and West Hill and produced by journalism students.
- The work includes research, field reporting, writing, photography, page design and audio/video website production. This intensive course requires a large time commitment that may include evenings and weekends. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.
- Prerequisite: 12 credits, including JOUA06H3 & JOUB11H3 & JOUB14H3 & JOUB18H3
- Corequisite: JOUB03H3 & JOUB05H3 & JOUB17H3 & JOUB20H3
- Breadth Requirement: Arts, Literature & Language
JOUB11H3 News Reporting

Practice in journalistic reporting and writing, starting with a simple news story and proceeding to feature and profile writing and coverage of municipal affairs. Class discussions focus on critical analysis of professional publications. Guest professional journalists discuss their experience and current issues in journalism. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 10 credits including [(MDSA21H3) or JOUA01H3], [(MDSA22H3) or JOUA02H3], [(MDSB26H3) or JOUB01H3], [(MDSB27H3) or JOUB02H3], (HUMB11H3).

Corequisite: JOUA06H3 & JOUB14H3 & JOUB18H3

Breadth Requirement: Arts, Literature & Language

JOUB14H3 Journalism Design

This course introduces the principles of design and electronic publishing. Students develop skills to produce multiplatform layouts, including broadsheet, tabloid and website formats, in preparation for experience on the print and online "Observer". Students will use InDesign to produce attractively designed journalistic layouts that reflect sound news judgment. This course is at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 10 credits including [(MDSA21H3) or JOUA01H3], [(MDSA22H3) or JOUA02H3], [(MDSB26H3) or JOUB01H3], [(MDSB27H3) or JOUB02H3], (HUMB11H3).

Corequisite: JOUA06H3 & JOUB11H3 & JOUB18H3

Breadth Requirement: Arts, Literature & Language

JOUB17H3 Radio News

The basics of radio journalism, including news, sports and entertainment reporting, interviewing, broadcast writing, performance and studio techniques. Students use digital audio recorders and handheld microphones to produce live-to-air (via Internet) newscasts and podcasts that are posted on the college's podcast web page. Stories are edited on digital audio software. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 12 credits, including JOUA06H3 & JOUB11H3 & JOUB14H3 & JOUB18H3

Corequisite: JOUB03H3 & JOUB05H3 & JOUB10H3 & JOUB20H3

Breadth Requirement: Arts, Literature & Language

JOUB18H3 Imaging: Photography for Journalists

An introduction to the basic concepts of photography and a deeper examination of the principles of photojournalism. Students create photo stories using a range of equipment (portable, battery-operated flash equipment, digital cameras, etc.) and learn how to edit images for publication, either in print or in Web form. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 10 credits including [(MDSA21H3) or JOUA01H3], [(MDSA22H3) or JOUA02H3], [(MDSB26H3) or JOUB01H3], [(MDSB27H3) or JOUB02H3], (HUMB11H3).

Corequisite: JOUA06H3 & JOUB11H3 & JOUB14H3

Breadth Requirement: Arts, Literature & Language

JOUB20H3 Multiplatform Journalism

This course focuses on design and writing for multiplatform presentations of editorial content. Instruction includes gathering, editing and uploading text, audio and video for display on websites and mobile handheld devices. Students learn the mechanics of news website construction and maintenance and protocols for storytelling in a digital milieu. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 12 credits, including JOUA06H3, JOUB11H3, JOUB14H3 & JOUB18H3

Corequisite: JOUB03H3, JOUB05H3, JOUB10H3 & JOUB17H3

Breadth Requirement: Arts, Literature & Language

JOUB24H3 Journalism in the Age of New Media

Journalism is undergoing a revolutionary change. Old trusted formats are falling away and young people are consuming, producing, exchanging, and absorbing news in a different way. The course will help students critically analyze new media models and give them the road map they will need to negotiate and work in New Media. This course is open only to students in the Journalism Joint Program.

Exclusion: (MDSB24H3)

JOUB39H3 Fundamentals of Journalistic Writing

An overview of the standard rules and techniques of journalistic writing. The course examines the basics of good writing style including words and structures most likely to cause problems for writers. Students will develop their writing skills through assignments designed to help them conceive, develop, and produce works of journalism. This course is open only to students in the Journalism Joint Program.

Prerequisite: [(MDSA21H3) or JOUA01H3] & [(MDSA22H3) or JOUA02H3] & HUMA01H3.

Exclusion: (MDSB39H3)

Breadth Requirement: Arts, Literature & Language

JOUC13H3 Beat Reporting

Student teams select a "beat", conduct research, and prepare a proposal. Each student researches and writes five stories. Each team publishes a niche magazine and designs an accompanying website, using multi-media skills of writing, photography, audio and video. The time commitment for this advanced course may include evenings and weekends. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 14.5 credits, including JOUB03H3, JOUB05H3, JOUB10H3, JOUB17H3 & [(JOUB09H3) or JOUB20H3]

Corequisite: JOUC16Y3 & JOUC17H3

Breadth Requirement: Arts, Literature & Language

JOUC16Y3 News Laboratory II

Students play more senior roles to produce content for the online and print editions of "The Observer". Participants attend staff meetings during class time, and research and write stories outside class. This intensive course requires a large time commitment that may include evenings and weekends. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 14.5 credits, including JOUB03H3 & JOUB05H3 & JOUB10H3 & JOUB17H3 & [(JOUB09H3) or JOUB20H3]
Corequisite: JOUC13H3 & JOUC17H3
Breadth Requirement: Arts, Literature & Language

**JOUC17H3 Television News**

This course focuses on video journalism skills for a multi-platform environment. Whether covering stories for traditional television news or a website, students learn how to shoot, edit and produce editorial content. Students also staff a live-to-air news program where they anchor as well as work behind the scenes. This course is taught at Centennial College and is open only to students in the Journalism Joint Program.

Prerequisite: 14.5 credits, including JOUB03H3 & JOUB05H3 & JOUB10H3 & [JOUB09H3] or JOUB20H3
Corequisite: JOUC13H3 & JOUC16Y3
Breadth Requirement: Arts, Literature & Language

**Media Studies**

MDSA02H3 History of Media and Technology. See the Media Studies section of this Calendar for full course descriptions.

---

**Languages**

**Faculty List**

P.R. León, M.A., Ph.D. (Cornell), *Professor Emeritus*
C.V. Ponomareff, M.A., Ph.D. (Toronto), *Professor Emeritus*
R. Skyrme, B.A., M.Litt. (Bristol), M.A., Ph.D. (Michigan), *Professor Emeritus*
H. Wittmann, M.A., Ph.D. (Mass.), *Professor Emeritus*
H.X. Wu, M.A., Ph.D. (Toronto), *Senior Lecturer*
I. Dyson, B.A., M.A., Ph.D. (Toronto), *Lecturer*
N. Sajid, B.A., M.A., M. Phil. (JNU), *Lecturer*

The courses listed under LGG include language courses in Arabic, Hindi, Latin, Mandarin Chinese, Sanskrit Spanish and Tamil. Registration in all courses with the prefix LGG is subject to the approval of the instructor. Students will be assessed at the beginning of the course in a manner to be determined by the instructor. Students whose level of proficiency in the language is inappropriate for the level of the course will not be approved for enrolment. In some courses, the status of students will be listed as "interim" (INT) until they are approved (APP) by their instructors. Note that students are not permitted to take courses in a language in the wrong sequence (i.e., a lower-level course after a higher-level one).

For further information about language courses, please consult the Coordinator of Language Studies, at languagecoordinator@utsc.utoronto.ca or, where appropriate, the instructors of these courses.

**Language Citation**

U of T Scarborough offers a growing range of language opportunities and, as students seek international study, work opportunities and post-graduate study, they may be assisted by a notation of language proficiency. See the Language Citation section of the Calendar for more information about this notation.

The Languages Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_la.html

**LGGA30H3 Introductory Spanish I**

An elementary course for students with no knowledge of Spanish. The course develops listening, speaking, reading, and writing skills through culturally-based materials. Oral and written materials are enhanced by audio-visual and computer-based activities.

Exclusion: Grade 12 Spanish, SPA100Y, native or near-native proficiency in Spanish. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course.

Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

**LGGA31H3 Introductory Spanish II**

A continuation of LGGA30H3.

Prerequisite: LGGA30H3
Exclusion: Grade 12 Spanish, SPA100Y, native or near-native proficiency in Spanish. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.

Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

**LGGA40H3 Introductory Modern Standard Arabic I**

An introduction to the basic grammar and vocabulary of standard Arabic, the language common to the Arab world. Classroom activities will promote speaking, listening, reading, and writing. Special attention will be paid to reading and writing in the Arabic script.

Exclusion: ARA212Y, (NMC210Y), NML210Y, Arabic instruction in high school, prior knowledge of spoken Arabic. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course.

Note: students whose home language is a variety of spoken Arabic should enrol in LGGB45H3.

Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

**LGGA41H3 Introductory Modern Standard Arabic II**

A continuation of LGGA40H3. This course will build on the skills learned in LGGA40H3 and will provide further practice in reading and writing in the Arabic script.

Prerequisite: LGGA40H3
Exclusion: ARA212Y, (NMC210Y), NML210Y, Arabic instruction in high school, prior knowledge of spoken Arabic.
LGGA50H3 Introductory Latin I
An elementary course for students with no knowledge of classical Latin. An introduction to the structure of Latin, with some attention to the place of Latin in the Indo-European language family and its cognate and derivative relationships. Exclusion: LAT100Y or higher, LAT102H, LAT150H. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite. Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGA51H3 Introductory Latin II
A continuation of LGGA50H3, with some reading of elementary texts. Prerequisite: LGGA50H3 Exclusion: LAT100Y or higher, LAT102H, LAT151H. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite. Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGA54H3 Introductory Sanskrit I
An introduction to Sanskrit, the classical language of ancient India. Sanskrit is also the language of traditional Hinduism and the basis of early Buddhist texts. Students are introduced to the structural properties of Sanskrit and the Devanagari script, used in various North Indian languages such as Hindi, Marathi and Bihari. Exclusion: EAS282Y, NEW210Y, RLG260Y, SAN291Y. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course. Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA55H3 Introductory Sanskrit II
This course is a continuation of Sanskrit I. Students should gain enough familiarity with the script and the structure of the language to be able to read short texts in Sanskrit. Prerequisite: LGGA54H3 Exclusion: EAS282Y, NEW210Y, RLG260Y, SAN291Y. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite. Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA60H3 Introductory Mandarin I
A comprehensive introduction to Mandarin as a foreign language for students with no previous knowledge of any aspect of any Chinese dialect. This course emphasizes integrated practical Chinese instruction in listening, speaking, reading, writing (from characters to compositions) and translation (from Chinese into English and from English into Chinese). Exclusion: All EAS, CHI & LGG Chinese language courses. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course. Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA61H3 Introductory Mandarin II
A continuation of LGGA60H3. This course will build on the skills learned in LGGA60H3. Prerequisite: LGGA60H3 or (LGGA01H3) Exclusion: All EAS, CHI & LGG Chinese courses except LGGA60H3 or (LGGA01H3). The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite. Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGA70H3 Introductory Hindi I
An elementary course for students with no knowledge of Hindi. Students learn the Devanagari script and the Hindi sound system in order to start reading and writing in Hindi. The course also develops listening and speaking skills through culturally-based materials. Course materials are enhanced by audio-visual and computer-based activities. Exclusion: HIN212Y, NEW212Y, any knowledge of Hindi. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course. Note: Students who speak Hindi or Urdu as a home language should enrol in LGGB70H3 or LGGB71H3. Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA71H3 Introductory Hindi II
A continuation of LGGA70H3. Prerequisite: LGGA70H3 Exclusion: HIN212Y, NEW212Y, knowledge of Hindi beyond materials covered in LGGA70H3. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite. Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGA74H3 Introductory Tamil I
An elementary course for students with minimal or no knowledge of Tamil. Students learn the Tamil script and sound system. The course also develops listening and speaking skills through culturally-based materials. Course materials are enhanced by audio-visual and computer-based activities. Exclusion: NEW213Y, high school Tamil, more than minimal knowledge of Tamil. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course. Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGA75H3 Introductory Tamil II
A continuation of LGGA74H3. Prerequisite: LGGA74H3 Exclusion: NEW213Y, knowledge of Tamil beyond materials covered in LGGA74H3. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
LGGB43H3 Intermediate Modern Standard Arabic II
A continuation of LGGB42H3. Through the use of authentic texts this course builds on language skills and cultural knowledge acquired in previous courses. The course also includes translation from Arabic to English and vice versa.
Prerequisite: LGGB42H3
Exclusion: ARA312Y, NML310Y, Arabic courses in high school; advanced knowledge of Arabic. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB45H3 Modern Standard Arabic I for Students with Prior Background
A course for students exposed to informal spoken Arabic who wish to reinforce their ability to understand, speak, read and write Modern Standard Arabic. This course includes instruction in grammar, reading comprehension, and composition, through contemporary literary and non-literary texts, and builds oral proficiency with class discussions and audio-visual materials.
Exclusion: Not for students educated in Arabic-language schools
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB54H3 Intermediate Sanskrit I
Students will gain further experience in structure and vocabulary, through exposure to a variety of types of text such as fable, instructional and drama. Classes will meet as a workshop setting.
Prerequisite: LGGB55H3
Exclusion: EAS381H, SAN392Y or higher.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB55H3 Intermediate Sanskrit II
A continuation of Intermediate Sanskrit I. The class also works on paleography, looking at a single text copied in different character sets by different hands.
Prerequisite: LGGB54H3
Exclusion: EAS383H, SAN392Y or higher.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB60H3 Intermediate Mandarin I
This course will develop listening, speaking, reading, and writing skills in Mandarin. Writing tasks will help students to progress from characters to compositions and will include translation from Mandarin to English and vice versa. The course is not open to students who have more than the rudiments of Mandarin.
Prerequisite: LGGA61H3 or (LGGA02H3)
Exclusion: All EAS & CHI 200- and higher level Chinese language courses; all B- and higher level LGG Chinese language courses; native speakers of any variety of Chinese. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB42H3 Intermediate Modern Standard Arabic I
Building on LGGA41H3, this course develops reading, writing, listening and speaking skills in standard Arabic and introduces new vocabulary and grammatical concepts in context. The course also includes discussion of colloquial Arabic and cultural aspects of everyday life in Arabic-speaking communities.
Prerequisite: LGGA41H3
Note: Students whose home language is a variety of spoken Arabic should enrol in LGGB45H3.
Exclusion: ARA312Y, NML310Y, Arabic courses in high school; advanced knowledge of Arabic. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB33H3 Intermediate Spanish II
A continuation of LGGB32H3.
Prerequisite: LGGB32H3
Exclusion: SPA220Y, native or near-native proficiency in Spanish. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB32H3 Intermediate Spanish I
This course reviews Spanish usage and grammar and builds proficiency in listening, speaking, reading, and writing skills. There is a strong focus on the study of culture and the development of cross-cultural analysis.
Prerequisite: LGGA80H3
Exclusion: SPA220Y, native or near-native proficiency in Spanish. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA80H3 Introductory Japanese I
A beginning course for those with minimal or no knowledge of Japanese. The course builds proficiency in both language and culture. Language practice includes oral skills for simple daily conversation; students will be introduced to the Japanese writing systems and learn to read and write simple passages.
Exclusion: EAS120Y. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGA81H3 Introductory Japanese II
Continuation of Introductory Japanese I.
Prerequisite: LGGA80H3
Exclusion: EAS120Y. The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB61H3 Intermediate Mandarin II
A continuation of LGGB60H3.
Prerequisite: LGGB60H3 or (LGGB03H3)
Exclusion: All EAS & CHI 200- and higher level language
Chinese courses; all B- and higher level LGG Chinese
language courses except LGGB60H3 or (LGGB03H3);
native speakers of any variety of Chinese. The instructor has
the authority to exclude students whose level of proficiency is
unsuitable for the course, including those students who meet
the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB62H3 Intermediate Mandarin for Heritage Students I
This course will further improve the literacy skills of
heritage students by studying more linguistically sophisticated
and topically extensive texts. Those who have not studied
pinyin, the Mandarin pronunciation tool, but know about 600-
800 complex or simplified Chinese characters should take this
course instead of courses LGGB64H3 and LGGB65H3.
Prerequisite: (LGGA63H3)
Exclusion: All EAS & CHI 200- and higher level language
Chinese courses; all B- and higher level LGG language
Chinese courses. The instructor has the authority to exclude
students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB63H3 Intermediate Mandarin for Heritage Students II
A continuation of LGGB62H3.
Prerequisite: LGGB62H3
Exclusion: All EAS & CHI 200- and higher level language
Chinese courses; all B- and higher level LGG Chinese
language courses except LGGB62H3.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB64H3 Mandarin I for Students with Prior Background
An introduction to Mandarin for students who speak some
Chinese (any dialect) because of their family backgrounds but
have minimal or no literacy skills in the language. Emphasis
is placed on Mandarin phonetics and literacy through reading,
writing and translation (English to Chinese & Chinese to
English).
Exclusion: (LGGA62H3). All EAS, CHI & LGG Chinese
language courses. The instructor has the authority to exclude
students whose level of proficiency is unsuitable for the course.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGB65H3 Mandarin II for Students with Prior
Background
A continuation of LGGB64H3.
Prerequisite: LGGB64H3 or (LGGA62H3)
Exclusion: (LGGA63H3). All EAS, CHI & LGG Chinese
language courses except LGGB64H3 or (LGGA62H3). The
instructor has the authority to exclude students whose level of
proficiency is unsuitable for the course, including those
students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB70H3 Hindi I for Students with Prior Background
Continuation of LGGB70H3.
Prerequisite: LGGB70H3
Exclusion: Not for students educated in India. The instructor
has the authority to exclude students whose level of
proficiency is unsuitable for the course including those
students who meet the prerequisite.
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

LGGB71H3 Hindi II for Students with Prior Background
Continuation of LGGB70H3.
Prerequisite: LGGB70H3
Exclusion: Not for students educated in India. The instructor
has the authority to exclude students whose level of
proficiency is unsuitable for the course.
Enrolment Limits: 25
Breadth Requirement: History, Philosophy & Cultural Studies

LGGB74H3 Intermediate Tamil
Tamil language taught through culture for students with
heritage language skills or prior formal study. The cultures of
South India, Sri Lanka and diaspora populations will be
studied to build literacy skills in the Tamil script as well as
further development of speaking and listening skills.
Prerequisite: LGGB70H3
Exclusion: Not for students educated in Tamil Naadu or Sri
Lanka.
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

LGGC30H3 Advanced Spanish: Language, Culture and
Literature
Focus is on advanced language skills through study of
literature and arts in Spain and the Americas within their
cultural context. The course includes literary and non-literary
texts and other media, with advanced grammar review,
composition and conversation. Evaluation is based on
compositions, participation, presentations, and examinations.
Prerequisite: LGGB33H3
Exclusion: SPA320Y, native or near-native proficiency in
Spanish
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGC32H3 Business Spanish
The Spanish language in a business context. Designed
with the Management Program in mind, the aim is to develop
facility in specialized uses of the Spanish language. The
course uses texts and audio-visual materials to present the
business world from within and through popular culture and
literature.
Prerequisite: LGGB33H3
Exclusion: SPA323H
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC33H3 Introduction to Spanish Translation and Interpretation
A workshop in translation to and from Spanish, focusing on basic theories and problems of translation. Translation of texts from a variety of sources, including law, mass media, business, and science will broaden students' vocabulary and develop proficiency in handling non-literary modes of expression.
Prerequisite: LGGC30H3 or LGGC34H3 or LGGC35H3
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGC34H3 Advanced Spanish: Spain
Focus is on advanced language skills through the study of history, popular culture, and the arts. Using literary and historical readings, film and other media from Spain, the course includes advanced grammar review, composition and conversation. Evaluation is based on written compositions, class participation and presentations, and examinations.
Prerequisite: LGGB33H3
Exclusion: SPA320Y, native or near native proficiency in Spanish
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGC35H3 Advanced Spanish: The Americas
Focus is on advanced language skills through the study of history, popular culture, and the arts. Using literary and historical readings, film and other media from Latin America, the course includes advanced grammar review, composition and conversation. Evaluation is based on written compositions, class participation and presentations, and examinations.
Prerequisite: LGGB33H3
Exclusion: SPA320Y, native or near native proficiency in Spanish
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC39H3 NON-CREDIT: Spanish Across the Disciplines
Non-credit course applying Spanish language skills to a course with related content. Students co-enrol in a relevant course in Humanities, Social Sciences, Arts, etc. A portion of the course work such as readings or written assignments will be completed in Spanish. Course may be used to complete the Language Citation.
Prerequisite: LGGC30H3 or LGGC32H3 or LGGC34H3 or LGGC35H3. Prior arrangement with course instructors required.

LGGC60H3 Advanced Mandarin I
This course develops all four language skills (speaking, listening, reading, and writing), with special attention to idiomatic expressions. Through a variety of texts and interactive materials, students will be introduced to aspects of Chinese life and culture.
Note: This course is not for native or near-native speakers.
Prerequisite: LGGB61H3 or (LGGB04H3)
Exclusion: LGGC62H3 or higher, all Chinese language courses with the exception of CHI100Y, CHI200Y,
EAS100Y & EAS200Y
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGC61H3 Advanced Mandarin II
A continuation of LGGC60H3.
Note: This course is not designed for native or near native speakers.
Prerequisite: LGGC60H3
Exclusion: LGGC62H3 or higher, all EAS Chinese language courses with the exception of EAS100Y and EAS200Y
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC62H3 Advanced Mandarin: Culture in the East and West
Develops skills in spoken Mandarin and written varieties of Chinese. The course focuses on contrasts between Chinese and Western cultures. This course presents a variety of cultural and literary materials, through which students will further their language skills and learn approximately 400 new characters.
Prerequisite: LGGB63H3
Note: Students who complete LGGB61H3 may request permission of instructor to take this course.
Exclusion: (LGGB66H3), (LGGB67H3), LGGC64H3, LGGC65H3, LGGC66H3, LGGC67H3
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

LGGC63H3 Advanced Mandarin: Pop Culture and the State
Develops skills in spoken Mandarin and written varieties of Chinese. The course focuses on the vision of the Chinese state presented in popular culture. This course presents a variety of text and non-text materials, through which students will further their language skills and learn approximately 400 new characters.
Prerequisite: LGGB63H3
Note: Students who complete LGGB61H3 may request permission of instructor to take this course.
Exclusion: (LGGB66H3), (LGGB67H3), LGGC64H3, LGGC65H3, LGGC66H3, LGGC67H3
Enrolment Limits: 25
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC64H3 Reading Chinese: China from the Inside Out
Intended for students from Hong Kong, Macao, Taiwan and elsewhere, but usually excluding mainland China. Students must already know 2,500 complex Chinese characters and be able to read everyday publications, e.g., newspapers. Pinyin, complex-simplified character conversion, and fluency are emphasized through reading and discussing advanced materials, presentations, and essay writing.
Exclusion: EAS290Y, (LGGB01H3), (LGGB66H3). The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course.
Note: The sequence of courses offered in the Heritage and Non Heritage streams of Mandarin Chinese are not adequate preparation for this course.
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language
Linguistics

LGGC65H3 Reading Chinese: Global Chinese Perspectives
A continuation of LGGC64H3.
Prerequisite: LGGC64H3 or (LGGB66H3) or (LGGB01H3)
Note: The sequence of courses offered in the Heritage and Non Heritage streams of Mandarin Chinese are not adequate preparation for this course
Exclusion: EAS290Y, (LGGB02H3), (LGGB67H3). The instructor has the authority to exclude students whose level of proficiency is unsuitable for the course, including those students who meet the prerequisite.
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC66H3 Classical Chinese I
This course will examine classical Chinese texts such as Zen parables, philosophical maxims, proverbial sayings, rhyming couplets, short poems, and Buddhist stories. A working knowledge of modern Chinese will be assumed.
Prerequisite: LGGC65H3 or (LGGB67H3) or (LGGB02H3)
Exclusion: EAS206Y, EAS306Y
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

LGGC67H3 Classical Chinese II
A continuation of LGGC66H3 (Classical Chinese I).
Prerequisite: LGGC66H3
Exclusion: EAS206Y, EAS306Y
Enrolment Limits: 30
Breadth Requirement: History, Philosophy & Cultural Studies

LGGC70H3 Advanced Hindi: From Hindustan to Modern India
Advanced language learning through an introduction to the historical development of the Hindi language. Students develop language skills through the study of educational structure, and literary and cultural institutions in colonial and postcolonial India. The course studies a variety of texts and media and integrates composition and conversation.
Prerequisite: [LGGB70H3 & LGGB71H3]
Exclusion: Not for students educated in India.
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

LGGD97H3
LGGD98H3 Experiential Learning in a Language Community
A course for language learning in a community setting. In this course, students further their language proficiency outside the classroom with a project requiring the use of Arabic, Mandarin, Hindi, Spanish, or Tamil for 4-10 hours per week in a community environment. Requires final paper written in the community language.
Prerequisite: 8.5 credits, including a C-level language course, or permission of instructor

Linguistics

Faculty List
R.I. Binnick, B.A. (CUNY), M.A., Ph.D. (Chicago), Professor
D.M. James, B.A. (UBC), M.A. (Cornell), Ph.D. (Michigan), Professor Emeritus
R. Helms-Park, M.A., Ph.D. (Toronto), Associate Professor
Y. Kang, B.A. (Seoul National), Ph.D. (MIT), Associate Professor
J. Ndayiragije, M.A. (Montreal-UQAM), Ph.D. (Montreal-UQAM), Associate Professor
R. Smyth, B.A. (Carleton), M.Sc. (Alberta), Ph.D. (Alberta), Associate Professor
C. Narayan, A.B. (Berkeley), M.A. (Berkeley), Ph.D. (Michigan), Assistant Professor
K. McCrindle, M.A., Ph.D. (Toronto), Senior Lecturer

Program Director: R. Helms-Park: 416-287-7142 Email: rhelms@utsc.utoronto.ca

Linguistics is the scientific study of human language. It encompasses theories of linguistic structure in all domains: speech sounds (phonetics and phonology), words (morphology), sentences (syntax), meaning (semantics), and texts or conversations (discourse). Other sub-fields of linguistics include psycholinguistics (language acquisition, language processing, learning how to read, and associated disorders, as well as the neural architecture underlying all of these); sociolinguistics (language variation according to region, gender, class, etc., as well as the social functions of language); historical linguistics (how languages change across time, and why); and applied linguistics (e.g. second language learning, translation, clinical linguistics).

The Major Program in Linguistics is designed to help students prepare for entry into professional programs in areas with a significant language component, such as speech/language pathology, education, and language teaching. Students with a particular interest in psycholinguistics can enrol in the Specialist Program in Psycholinguistics which provides excellent preparation for entry into postgraduate programs in speech/language pathology, psycholinguistics and education. The Specialist Program in Linguistics is designed for students who are interested in a more intensive study of linguistics or entry into a graduate program in linguistics.

Guidelines for 1st year course selection
Students intending to complete the Specialist Program in Psycholinguistics should include the following in their first year course selection: LINA01H3, LINA02H3, PSYA01H3, PSYA02H3. Students intending to complete the Specialist or Major Program in Linguistics should include LINA01H3 and LINA02H3 and should consider including a language course. Students intending to complete the Minor Program in Linguistics should include LINA01H3 and LINA02H3.
Note: For Co-op opportunities related to the Specialist Program in Psycholinguistics, the Specialist Program in Linguistics and the Major Program in Linguistics, please see Humanities and Social Sciences Co-operative Program section in this Calendar. The Linguistics/Psycholinguistics Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_li.html

SPECIALIST PROGRAM IN PSYCHOLINGUISTICS (ARTS)
Undergraduate Advisor: Email: linguistics-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete 12.5 full credits, including 4.0 full credits at the C- and D-levels of which 1.0 full credit must be at the D-level as follows:

1. LINA01H3 Introduction to Linguistics
2. LINA02H3 Applications of Linguistics
   PSYA01H3 Introductory Psychology: Part I
   PSYA02H3 Introductory Psychology: Part II
   LINC02H3 Phonology II
   LINC05H3 Morphology
   LINC11H3 Syntax II
   LINC12H3 Semantics: The Study of Meaning
3. 1.5 full credits from of the following courses:
   LINB20H3 Sociolinguistics
   LINC02H3 Phonology II
   LINC05H3 Morphology
   LINB09H3 Phonetics: The Study of Speech Sounds
   LINC06H3 Phonetics: The Study of Speech Sounds
   PLIC24H3 First Language Acquisition
   PLIC55H3 Psycholinguistics
   PLIC65H3 Quantitative Methods in Linguistics
4. 2.5 full credits from the following courses:
   LINA03H3 Structure of American Sign Language
   LINB06H3 Syntax I
   LINB13H3 Language Diversity and Language Universals
   LINB09H3 Phonetics: The Study of Speech Sounds
   PLIC24H3 First Language Acquisition
   PLIC55H3 Psycholinguistics
   PLIC65H3 Quantitative Methods in Linguistics
5. 1.5 full credits from the following courses:
   PLIC65H3 Quantitative Methods in Linguistics (highly recommended)
   PSYB20H3 Introduction to Developmental Psychology
   PSYB51H3 Perception and Cognition or PSYB57H3 Memory and Cognition
   PSYB65H3 Human Brain and Behaviour
   PSYC21H3 Advanced Developmental Psychology
6. 2.0 further full credits in LIN and/or PLI

SPECIALIST PROGRAM IN LINGUISTICS (ARTS)
Undergraduate Advisor: Email: linguistics-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete 12.0 full credits, including 4.0 full credits at the C- and D-level of which 1.0 full credit must be at the D-level as follows:

1. All of the following:
   LINA01H3 Introduction to Linguistics
   LINA02H3 Applications of Linguistics
   LINC02H3 Phonology II
   LINB04H3 Phonology I
   LINB06H3 Syntax I
   LINB09H3 Phonetics: The Study of Speech Sounds
   LINB13H3 Language Diversity and Language Universals
   LINB20H3 Sociolinguistics
   LINC02H3 Phonology II
   LINC05H3 Morphology
   LINC11H3 Syntax II
   LINC12H3 Semantics: The Study of Meaning
2. 3.0 full credits from the following, including at least 1.0 full credit from Group A and at least 1.0 full credit from Group B:
   Group A
MAJOR PROGRAM IN LINGUISTICS (ARTS)
Undergraduate Advisor: Email: linguistics-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete eight full credits, as follows:

1. LINA01H3 Introduction to Linguistics
   LINA02H3 Applications of Linguistics
   LINB04H3 Phonology I
   LINB06H3 Syntax I
   LINB09H3 Phonetics: The Study of Speech Sounds

2. One of the following:
   LINB20H3 Sociolinguistics
   LINC05H3 Morphology
   LINC12H3 Semantics: The Study of Meaning

3. Four further full credits in LIN and/or PLI, of which at least two credits must be at the C- or D-level.

4. One full credit in a language.

MINOR PROGRAM IN LINGUISTICS (ARTS)
Undergraduate Advisor: Email: linguistics-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete four full credits, as follows:

All of the following courses:

1. LINA01H3 Introduction to Linguistics
   LINA02H3 Applications of Linguistics

2. Any two of the following:
   LINB04H3 Phonology I
   LINB06H3 Syntax I
   LINB09H3 Phonetics: The Study of Speech Sounds

3. Two further full credits in LIN and/or PLI of which at least one credit must be at the C- or D-level.

LINA01H3 Introduction to Linguistics
An introduction to the various methods and theories of analyzing speech sounds, words, sentences and meanings, both in particular languages and language in general.
Exclusion: LIN100Y
Breadth Requirement: Arts, Literature & Language

LINA02H3 Applications of Linguistics
Application of the concepts and methods acquired in LINA01H3 to the study of, and research into, language history and language change; the acquisition of languages; language disorders; the psychology of language; language and in the brain; and the sociology of language.
Prerequisite: LINA01H3
Exclusion: LIN100Y
Breadth Requirement: Arts, Literature & Language

LINA10H3 Structure of American Sign Language
An introduction to the structure of American Sign Language (ASL): Comparison to spoken languages and other signed
languages, together with practice in using ASL for basic communication.  
Prerequisite: LINA01H3  
Enrolment Limits: 35  
Breadth Requirement: Arts, Literature & Language  

**LINB04H3 Phonology I**  
Practice in analysis of sound patterns in a broad variety of languages.  
Prerequisite: LINB09H3  
Exclusion: LIN229H  
Breadth Requirement: Arts, Literature & Language  

**LINB06H3 Syntax I**  
Practice in analysis of sentence structure in a broad variety of languages.  
Prerequisite: LINA01H3  
Exclusion: LIN232H  
Breadth Requirement: Arts, Literature & Language  

**LINB09H3 Phonetics: The Study of Speech Sounds**  
An examination of physiological and acoustic bases of speech.  
Prerequisite: LINA01H3  
Exclusion: LIN228H  
Breadth Requirement: Natural Sciences  

**LINB13H3 Language Diversity and Language Universals**  
An introduction to linguistic typology with special emphasis on cross-linguistic variation and uniformity in morphology and syntax.  
Prerequisite: LINB06H3  
Exclusion: LIN306H  
Breadth Requirement: Arts, Literature & Language  

**LINB17H3 The Structure of English Sentences**  
Description and analysis of various aspects of the structure and grammar of English sentences, with emphasis on those distinctive and characteristic features most of interest to teachers and students of the language.  
Exclusion: LIN204H.  
Breadth Requirement: Arts, Literature & Language  

**LINB18H3 The Structure of English Words**  
Description and analysis of the structure of English words, including the sound and word structure systems, with emphasis on those distinctive and characteristic features most of interest to teachers and students of the language.  
Exclusion: LIN203H. LINB18H3 may not be taken after or concurrently with LINC05H3.  
Breadth Requirement: Arts, Literature & Language  

**LINB20H3 Sociolinguistics**  
The study of the relationship between language and society. Topics include: how language reflects and constructs aspects of social identity such as age, gender, socioeconomic class and ethnicity; ways in which social context affects speakers’ use of language; and social factors which cause the spread or death of languages.  
Prerequisite: LINA02H3  
Exclusion: (LINB21H3), (LINB22H3), LIN256H, FREC48H3  
Breadth Requirement: Social & Behavioural Sciences  

**LINC02H3 Phonology II**  
Basic issues in phonological theory. This course assumes familiarity with phonetic principles, as discussed in LINB09H3, and with phonological problem-solving methods, as discussed in LINB04H3.  
Prerequisite: LINB04H3 & LINB09H3  
Exclusion: LIN322H  
Breadth Requirement: Arts, Literature & Language  

**LINC05H3 Morphology**  
Core issues in morphological theory, including properties of the lexicon and combinatorial principles governing word formation as they apply to French and English words.  
Same as FREC45H3  
Prerequisite: LINB06H3 or FREB45H3  
Exclusion: LIN231H, LIN333H, (LINB05H3), FRE387H, FREC45H3  
Breadth Requirement: Arts, Literature & Language  

**LINC06H3 Language Change**  
An introduction to language change and language relationships.  
Prerequisite: LINB04H3  
Exclusion: LIN362H  
Breadth Requirement: History, Philosophy & Cultural Studies  

**LINC09H3 Phonetic Analysis**  
Practical application of phonetic theory with special emphasis on instrumental and experimental techniques.  
Prerequisite: LINB09H3  
Exclusion: LIN423H  
Enrolment Limits: 15  
Breadth Requirement: Natural Sciences  

**LINC11H3 Syntax II**  
Core issues in syntactic theory, with emphasis on universal principles and syntactic variations between French and English.  
Same as FREC46H3.  
Prerequisite: LINB06H3 or FREB45H3  
Exclusion: LIN232H, LIN331H, FRE378H, FREC46H3  
Breadth Requirement: Arts, Literature & Language  

**LINC12H3 Semantics: The Study of Meaning**  
An introduction to the role of meaning in the structure, function and use of language. Approaches to the notion of meaning as applied to English and French data will be examined.  
Same as FREC12H3.  
Prerequisite: LINA01H3 or [FREB44H3 and FREB45H3]  
Exclusion: FREC12H3, FRE386H, LIN341H, (FREC49H3), (FRED49H3)  
Breadth Requirement: History, Philosophy & Cultural Studies  

**LINC27H3 Language and Ethnicity**  
How different ethnic groups become identified by their speech, and concentrating especially on bilingualism in immigrant communities. Conversational pragmatics (e.g. code-switching, language contact issues (e.g. borrowing), and how speakers’ consciousness of such phenomena affects their use.  
Prerequisite: One full credit at the B-level in LIN or PLI, excluding LINB17H3 and (LINB18H3)  
Breadth Requirement: Social & Behavioural Sciences
LINC28H3 Language and Gender
An introduction to the research on differences between women and men in how they use language and how they behave in conversational interaction, together with an examination of the role of language in reflecting and perpetuating cultural attitudes towards gender.
Same as WSTC28H3
Prerequisite: LINA01H3 and one full credit at the B-level in ANT, LIN, SOC or WST
Exclusion: JAL355H, WSTC28H3
Breadth Requirement: Social & Behavioural Sciences

LINC30H3 Language Variation
Theory and methodology of variationist sociolinguistics. Topics include: Collection and analysis of natural speech data, linguistic and social factors that constrain language variation (e.g., phonological environment, word classes, style, age, social class, gender, ethnicity, social networks), stable variation vs. changes in progress, and acquisition of linguistic variation.
Prerequisite: LINA01H3 & LINB20H3
Exclusion: (LIN256H), LINC351H
Breadth Requirement: Arts, Literature & Language

LINC47H3 Special Topics in Linguistics: Pidgin and Creole Languages
A study of pidgin and Creole languages worldwide. The course will introduce students to the often complex grammar of these languages and examine French, English, Spanish, and Dutch-based Creoles, as well as regional varieties. It will include some sociohistorical discussion.
Same as FRED47H3.
Prerequisite: [LINA01H3 and LINB02H3] or [FRED44H3 and FRED45H3]
Exclusion: FRED47H3
Breadth Requirement: Arts, Literature & Language

PLIC15H3 Speech Perception
An examination of the acoustics and perception of human speech. By looking at the acoustic properties of a variety of languages (including Tamil, Tagalog and First Nations languages), we will explore how people learn the peculiarities of their sound system and what this reveals about the nature of human speech perception.
Prerequisite: LINB04H3 & LINB09H3
Breadth Requirement: Social & Behavioural Sciences

PLIC42H3 First Language Acquisition
Descriptions of children's pronunciation, vocabulary and grammar at various stages of learning their first language. Theories of the linguistic knowledge and cognitive processes that underlie and develop along with language learning.
Prerequisite: LINB04H3 or LINB06H3 or LINB09H3
Exclusion: JLP315H
Breadth Requirement: Natural Sciences

PLIC55H3 Psycholinguistics
Experimental evidence for theories of how humans produce and understand language, and of how language is represented in the mind. Topics include speech perception, word retrieval, use of grammar in comprehension and production, discourse comprehension, and the role of memory systems in language processing.
Prerequisite: LINB04H3 or LINB06H3 or LINB09H3
Exclusion: JLP374H
Breadth Requirement: Natural Sciences

PLIC65H3 Quantitative Methods in Linguistics
An introduction to experimental design and statistical analysis for linguists. Topics include both univariate and multivariate approaches to data analysis for acoustic phonetics, speech perception, psycholinguistics, language acquisition, language disorders, and sociolinguistics.
Prerequisite: At least one full credit in PLI
Exclusion: LIN305H
Breadth Requirement: Quantitative Reasoning

LIND01H3

LIND02H3

LIND03H3 Independent Study in Linguistics
Independent study and research in an area of interest to the student. Students must obtain consent from a supervising instructor before registering. Interested students should contact the Program Supervisor for Linguistics.
Prerequisite: At least one full credit at the C-level in LIN & permission of the instructor.

LIND29H3 Seminar in Sociolinguistic Methodologies
Teaches research methodologies for sociolinguistics (interviews, corpus collection, surveys, ethnography, etc.) and helps students conduct individual research studies in real-life contexts.
Prerequisite: [LINB20H3 & one sociolinguistics course at the C-level (e.g. LINC27H3, LINC28H3 or LINC30H3)].

LIND46H3 Field Methods in Linguistics
Practice in language analysis based on elicited data from second language learners and foreign language speakers. Emphasis is put on procedures and techniques of data collection, as well as theoretical implications arising from data analysis.
Same as FRED46H3.
Prerequisite: [FRED44H3 and FREC46H3] or [LINC02H3 and LINC11H3]
Exclusion: FRED46H3, JAL401H
Breadth Requirement: Arts, Literature & Language

PLIC02H3

PLIC03H3 Independent Study in Psycholinguistics
Independent study and research in an area of interest to the student. Students must obtain consent from a supervising instructor before registering. Interested students should contact the Program Supervisor for psycholinguistics.
Prerequisite: At least one full credit at the C-level in PLI & permission of the instructor.
PLID34H3 The Psycholinguistics of Reading
An examination of linguistic and psycholinguistic issues pertinent to reading, as well as the role of a language's writing system and orthography in the learning process. Recommended for students in the Concurrent Teacher Education Program (French).
Prerequisite: [LINA01H3 or [FREB44H3 & FREB45H3]] & [PLIC24H3 or PLIB25H3]
Exclusion: (LINC34H3), (PLIC34H3)
Breadth Requirement: Natural Sciences

PLID44H3 Acquisition of the Mental Lexicon
An examination of L1 (first language) and L2 (second language) lexical (vocabulary) acquisition. Topics include: the interaction between linguistic and cognitive development; the role of linguistic/non-linguistic input; the developing L2 lexicon and its links with the L1 lexicon; the interface between lexical and syntactic acquisition within psycholinguistic and linguistic frameworks.
Prerequisite: PLIC24H3
Breadth Requirement: Natural Sciences

PLID55H3 Disorders of Speech and Language
Pathologies of language acquisition, comprehension and production. Topics include anatomy and physiology, voice disorders, articulation disorders, cleft palate, aphasia, apraxia, dysarthria, language delay, language learning disabilities, developmental delay, and hearing and auditory processing disorders.
Prerequisite: LINB09H3 and [LINC24H3 or LINC55H3]
Exclusion: JLS474H
Breadth Requirement: Social & Behavioural Sciences

Management

Faculty List
I. Averbakh, M.Sc., Ph.D. (Moscow Institute of Physics & Technology), Professor
S. Borins, B.A. (Harvard), M.P.P. (Kennedy School of Gov't), Ph.D. (Harvard), Professor
A. Saks, B.A. (Western), M.A.Sc. (Waterloo), Ph.D. (Toronto), Professor
A. Stark, B.A. (U.B.C.), M.Sc. (London), M.A., Ph.D. (Harvard), Professor
J. Wei, B.Sc. (Harbin Inst. (China)), M.B.A. (York), Ph.D. (Toronto), Professor
P. Aggarwal, B.A., M.B.A. (India), M.B.A., Ph.D. (Chicago), Associate Professor
M. Campolieti, B.Sc., M.A., Ph.D. (Toronto), Associate Professor
J. McCarthy, B.A., M.A., Ph.D. (Western), Associate Professor
D. Zweig, B.A., M.A.Sc., Ph.D. (Waterloo), Associate Professor
L. Cen, B.Sc. (Zhejiang), M.Sc. (Warwick), Ph.D. (HKUST), Assistant Professor
B. Connelly, B.A., Emory, Ph.D. (Minnesota), Assistant Professor
E. Eiling, M.Sc., Ph.D. (Tilburg University), Assistant Professor
K. Kim, B.A., M.B.A. (Korea), Ph.D. (Minnesota), Assistant Professor
S. D. Montes, B.A. (Laurentian), M.A. (Wilfrid Laurier), Ph.D. (Waterloo), Assistant Professor
J. Trougakos, B.S., M.B.A. (Oklahoma State), Ph.D. (Purdue), Assistant Professor
A. Xu, B.A. (Beijing), Ph.D. (Illinois), Assistant Professor
S.W. Ahmed, B.Com., M.A. (Sind), M.B.A. (Concordia), Senior Lecturer
C. Bovaird, B.A. (Queen's), M.Sc. (Stirling), M.B.A. (Western), Senior Lecturer
L. H. Chen, M.S.Ed. (U Penn), M.B.A. (Toronto), Ph.D. (Toronto), FCGA, Senior Lecturer
D. Chau, B. Com. (Toronto), M.B.A. (McMaster), Ph.D. (HKUST), CMA, Senior Lecturer
S. L. Daga, B.A. (Waterloo), M. Ed. (Toronto), CA (CICA) CPA., Senior Lecturer
J. Heathcote, B.A., M.A., Ph.D. (Western), Senior Lecturer
H. Laurence, B.A. (Amherst), M.A., Ph.D. (McGill), LLB (Osgoode), Senior Lecturer
G. Quan Fun, B.A. (Toronto), M.B.A. (Laurentian), CA, CMA, CGA., Senior Lecturer
P. Radhakrishnan, B.A. (Windsor), M.A., Ph.D. (Illinois), Senior Lecturer
A. Stavinoga, B.A. (Toronto), M.B.A. (York, Canada), CMA., Senior Lecturer
T. Dewan, B.Sc., M.B.A. (Panjab), Ph.D. (Texas), Lecturer
D. Kong, B.B.A. (Hawaii), M.B.A. (York), CMA., Lecturer
V. V. Quan, B.A.Sc., M.A.Sc., Ph.D. (Toronto), Lecturer

Chair: D. Zweig

The design of the curriculum in Management is guided by our mission statement, which follows: "The mission of the Department of Management at the University of Toronto Scarborough is to provide our students with the best pre-professional undergraduate management education in Canada. With special emphasis on our co-op model of education, we aim to provide a coherent set of learning experiences that simultaneously teaches management skills and develops the capacity to think analytically about managerial, economic and societal problems and opportunities. Our faculty engages in nationally and internationally recognized research which advances the frontiers of knowledge, serves the interests of our community, and brings new insights to our students. We will improve our students' current and future experiences by building and maintaining close links with private and public sector organizations, by helping students to bridge the gap between education and employment, and by providing a continuing and lively connection among current and former students of the Department."

The University of Toronto Scarborough offers the Bachelor of Business Administration degree to students who complete one of the
Specialist Programs in Management. We also offer a Co-operative version of the Management Program as well as a non-Co-op Certificate in Business.

**Limited enrolment:** Because of pressures of demand for places, it has been necessary to place enrolment limits on most Management courses including those given in the summer session, and on admission to Programs. Information on how to apply for admission to a Program and to limited enrolment courses will be available prior to the end of classes in April.

**Prerequisites:** Students are responsible for ensuring that they have the prerequisites for all Management courses. Students who knowingly or unwittingly register for courses for which they do not have the necessary prerequisites will be denied access to those courses. Students are reminded that an SDF (Standing deferred) in a course is considered as not meeting the prerequisite for the subsequent course.

**Management Programs**

The degree offered to management students (Co-op and Non-Co-op) is the B.B.A. Students qualify for the B.B.A. by completing one of the specialist programs in Management. All specialist programs have co-op options, and all are described below. B.B.A. students are not permitted to request either the Major Program in Economics for Management Studies or the Minor Program in Economics for Management Studies.

**Admissions**

Each year, 400 students will be admitted to the Specialist Programs in Management including Co-operative studies. There are three possible ways to be admitted to the Specialist Programs. (Students interested in Co-op should also refer to additional application information in the following Co-op Programs section).

1. **Directly from Secondary School**
   Most of the students will be admitted directly from high school, on the basis of academic performance. Applicants interested in the Specialist Programs in Management must have completed Grade 12 English and Grade 12 Calculus.

2. **At the End of First Year**
   Pre-program students will be considered for admission to the various B.B.A. programs at the end of the winter session of their first year. A second round of admissions takes place at the end of the following summer session. The minimum CGPA to guarantee admission to Non-Co-op B.B.A. is calculated annually. For this year, it will not be greater than 3.3.
   Applications to enter the Co-op B.B.A. (both from pre-program students and from B.B.A. students not in Co-op) will only be considered at the end of first year in the winter session Subject POST selection cycle only. Typically, the cut-off for admission to Co-op will be higher than the cut-off for admission to Non-Co-op. Applicants for the Specialist Programs in Management must have completed at least 4 full credits at the University of Toronto. Courses completed should include MGTA03H3, MGTA04H3, ECMA04H3, ECMA06H3, MATA32H3 & MATA33H3. MATA32H3 & MATA33H3 are strongly recommended, however MATA30H3/A31H3 & MATA35H3/A36H3/A37H3 may also be used to satisfy the calculus requirement. Decisions will be made when all grades are received. To be considered for admission to the BBA program, a student must request the Management subject post. Application for admission will be considered only for the round during which a student has made the subject post request. Please see the Registration Guide for more details.

3. **Late Admission**
   A limited number of places in the Non-Co-op B.B.A. will be available to students beyond the two application periods described in the previous section. Students may apply until they have completed up to 10.0 full credits, and admission will be on the basis of all grades received. Students who have completed more than 10.0 full credits will not be considered for admission to the Programs. Since the number of students accepted in this category is very limited, students who are denied admission after first year (in the periods at the end of the winter session and the end of the summer session in first year) are strongly advised to visit the Academic Advising & Career Centre to explore alternative program options.

**Guidelines for Course Selection for First-Year Students in Management Programs leading to the B.B.A.**

- **Non-Co-op Students directly admitted to the B.B.A.:**
  MGTA03H3, MGTA04H3, ECMA04H3, ECMA06H3, MATA32H3, MATA33H3. MGBT05H3, MGBT06H3 are allowed.

- **Co-op Students directly admitted to the B.B.A.:**
  All of the courses listed above for non-co-op students. Co-op students are required to take MGBT05H3 and MGBT06H3 in first year.

- **Students admitted directly into Management and Information Technology leading to the B.B.A.:**
  MGTA03H3, MGTA04H3, ECMA04H3, ECMA06H3, CSCA08H3, (CSCA65H3), CSGA48H3, and [MATA32H3 & MATA33H3 or MATA30H3 & MATA37H3]

**Recommended Schedule of courses for Co-op Students in First Summer Session:**
ECMB02H3, ECMB06H3, ECMB11H3, MGBT03H3, [MGBT27Y3 or MGBT23H3]

**Grades Required to Remain in Programs**

In the first year, students will take the courses required for the Program of their choice (see the following paragraph). For information on the assessment of co-op students, see the Co-operative Programs section of this Calendar. In order to remain in the Program, students who are not in co-op must continue to maintain a cumulative GPA (CGPA) of 2.0 or higher after having attempted at least 4 full credits. Credits received at UTSC from sources external to U of T (transfer credit, AP, IB etc.) will be included in the count of attempted credits.
Overall course load limit for B.B.A. students

Students may take a maximum of 3.0 full credits in any one session. On occasion, B.B.A. students who have completed at least 10.0 full credits and who have a cumulative GPA of at least 3.5 may be permitted into an additional half-credit course. Requests to add an additional course must be made in writing to management-supervisor-studies@utsc.utoronto.ca. This must be done after the wait list period has ended and before the last day to add courses for the session (see the Sessional Dates section of this Calendar). Students must provide an academic rationale for the request and include their name, student number, the course code and section requested. Note: that approval of a request to add a course outside Management and Economics does not guarantee a place in the course. Requests from students who do not meet the above criteria will not be considered.

Guidelines for Course Selection for Students Admitted to Pre-Program and for Non-Program students who are interested in applying to Management

Read the information sent with your offer of admission. Students must have at least 4.0 full credits from the University of Toronto to apply to Programs. For B.B.A. consideration, enrol in: MGTA03H3, MGTA04H3, ECMA04H3, ECMA06H3, MATA32H3, MATA33H3. Taking a course in the Humanities or Social Sciences in first year is recommended.

Notice to Non-Program Students

All B, C and D-level Management courses are restricted to students in the Management Programs. Management courses at the St. George campus are restricted and not available to UTSC students. Similarly, UTSC Management courses are not available to St. George campus students.

Breadth & Depth Within the Degree

Students who first completed courses as UTSC degree students in the 2010 Summer Session or in a subsequent session must fulfill breadth and depth requirements in order to graduate. (See the "Degrees" section of this Calendar for the full degree requirements.)

1. Depth: A minimum of 6.0 full credits must be taken at the C and/or D-Level. Of these, a minimum of 1.0 full credit must be at the D-level. Students may use any C and D-level courses to fulfill this requirement, regardless of whether or not they are also used as a Program Requirement.
2. Breadth: A half-credit from each of the following categories must be taken. Both Program Requirements and Electives may be used to fulfill this requirement.
   a) Arts, Literature, and Language
   b) History, Philosophy, and Cultural Studies
   c) Social and Behavioural Sciences
   d) Natural Sciences
   e) Quantitative Reasoning

Management students over the course of completing their program requirements will naturally fulfill categories c and e. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

CO-OPERATIVE PROGRAMS IN MANAGEMENT

Program Director: C. Arsenault (416-287-7112) E-mail: arsenault@utsc.utoronto.ca
Supervisor of Studies: S. Ahmed E-mail: management-supervisor-studies@utsc.utoronto.ca

The Management Co-operative Program is an enriched program which combines academic studies with work experience in public and private enterprises. Depending on their needs and abilities students work in areas such as accounting, public administration, auditing, communications, economic development, finance, human resources/personnel, information systems, marketing, policy and strategic planning. For information about admission, work placements and standing in the Program, please see the Co-operative Programs section of this Calendar.

Full Year/Trimester Programming

The Management Co-op Program operates on a trimester schedule, featuring three terms (fall, winter and summer) in each calendar year. Students work or study in all three terms for four years or until graduation requirements are met. The Program requires eight four-month terms of study and three work terms. Students normally begin with three to five study terms (fall, winter and summer), then alternate study and work terms. Students always conclude their degree with a study term.

Program Requirements

Curriculum

Co-op students follow the course requirements of one of the specialist programs described later in this section. In addition, all co-op students must take MGTC36H3 prior to commencement of their second work term. In the first two years of study most students will follow a common core curriculum of studies (please refer to the detailed requirements in the Management Programs). Students are advised to consult regularly with the Program Supervisor if they have questions regarding course selection and scheduling. It is however the students' individual responsibility to ensure that they have completed the correct courses to make them eligible for each work term and that they have correctly completed Program and degree requirements for graduation.
Management

Work Terms
To compete for a work term a student must be in good standing in the Program and must have completed:

- For the first work term: 7 full credits, including ECMA04H3, ECMA06H3, MGTA03H3, MGTA04H3, MGTB05H3, MGTB06H3, the appropriate Mathematics courses and the Introduction to Management Co-op Work Term Preparation Course
- For the second work term: 9 full credits, including MGTC36H3
- For the third work term: 11 full credits

SPECIALIST (CO-OPERATIVE) PROGRAM IN MANAGEMENT AND INTERNATIONAL BUSINESS (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: TBD  Email: TBD

The MIB is an exclusive co-op program that is designed to give students a broad exposure to all functional areas of Management while providing a unique understanding of the business world in a global context. Academically, the program requires a language development component and a number of specially designed courses emphasizing international business. Through the high-level curricular programming as well as the practical experiences abroad, students will experience an emphasis on cross-cultural communications and leadership, while simultaneously maintaining a quantitative and analytical focus. Students will also have the opportunity to maintain a more general academic approach, or use the electives to focus in on a specific discipline within the Management Program.

Program Admission:
Enrolment in the program is limited, and students may only apply directly from secondary school. Under normal circumstances, transfer students will not be considered for admission to the MIB program. The MIB is only offered as a Co-op program, and admissions will be based on the applicant’s academic performance as well as a supplementary application and interview process. Interviews will be held in February and March for students who pass the initial screening. Successful students will demonstrate strength in academics, extra-curricular and volunteer activities, as well as an interest and focus on developing global competencies. For further information please see the Co-operative Programs section in this calendar at www.utsc.utoronto.ca/~registrar.

MIB Prep Course and Study Term:
Students will complete a non-credit international co-op prep course in their first year prior to the first approved work term. Students are also required to complete one study term outside of Canada, typically in their second or third year with an approved partner University, and will be required to complete some of the program requirements during this time. Although scholarships may be available, students are expected to budget for the additional costs of studying abroad.

Work Term:
This program requires four years of study along with three approved academically related work terms. At least one of the work terms must be outside of Canada. Students must complete 7.0 credits prior to the commencement of their first work term, which will likely be in Canada. The location of the international placements will vary according to student interest, availability of positions, practicability and safety of an area, as well as established international relationships. For further information about status in the co-op program, fees, and regulations, please see the Co-operative Programs sections in this calendar at www.utsc.utoronto.ca/~registrar.

Program Requirements:
The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A:

Note: A single course may only be used once to fulfill one of the following requirements:

1. 10.5 credits in Management as follows:
   - MGTA03H3 Introduction to Management I
   - MGTA04H3 Introduction to Management II
   - MGTB03H3 Management Accounting
   - MGTB05H3 Financial Accounting I
   - MGTB06H3 Financial Accounting II
   - MGTB07H3 Principles of International Marketing
   - MGTB09H3 Principles of Finance
   - MGTB22H3 International Human Resources
   - MGTB25H3 International Organizational Behaviour
   - MGTC09H3 Intermediate Finance
   - MGTC31H3 The Legal Environment of Business I
   - MGTC34H3 International Accounting
   - MGTC36H3 Management Communications
   - MGTC74H3 Analysis for Decision-Making
   - MGTC76H3 International Financial Management
   - MGTC91H3 International Leadership Skills
   - MGTD01H3 International Business Ethics
   - MGTD19H3 Global Marketing
   - MGTD21H3 Introduction to International Business Law
   - MGTD48H3 International Corporate Strategy
   - MGTD79H3 International Capstone Case Analysis
2. 1.0 credit in Calculus from:
[MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3]

3. 3.0 credits in Economics for Management Studies as follows:
   ECMA04H3 Introduction to Microeconomics: A Mathematical Approach
   ECMA06H3 Introduction to Macroeconomics: A Mathematical Approach
   ECBM02H3 Price Theory: A Mathematical Approach
   ECBM06H3 Macroeconomic Theory and Policy: A Mathematical Approach
   ECMB11H3 Quantitative Methods in Economics I
   ECMB12H3 Quantitative Methods in Economics II

4. 0.5 credit in Economics for Management Studies from:
   ECMC61H3 International Economics: Finance or
   ECMC62H3 International Economics II

5. 2.0 credits of Languages (LGG) or French (FRE) courses, at least 1 credit of which must be completed at the B-level or above. All courses must be in the same language. Please note that your language skill will be assessed by the FRENCH and LANGUAGES areas before being formally placed in a given section.

6. 1.5 additional credits from courses other than MGT/ECM.
   The following are some of the courses from other departments that can be used to complement the Specialist Program in Management and International Business. Students may want to consider these courses as potential electives. Please note that some of these courses require prerequisites not included in this program:
   - GASB30H3 Asian Religions and Culture
   - PHLB08H3 Ethics and International Development
   - ANTA02H3 Introduction to Anthropology: Society, Culture and Language
   - ANTB20H3 Culture, Politics and Globalization
   - GGRA02H3 The Geography of Global Processes
   - IDSB01H3 Political Economy of International Development
   - IDSC12H3 Economics of Small Enterprise and Microcredit
   - POLA83H3 Exploring Globalization
   - POLA84H3 Globalization and Governance
   - POLB80H3 Introduction to International Relations

7. The remaining 1.5 credits needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student’s interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

SPECIALIST PROGRAM IN ECONOMICS FOR MANAGEMENT STUDIES (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: Iris Au  Email: economics-supervisor-studies@utsc.utoronto.ca

This program which has a co-op option is designed to provide students with a broad exposure to all the functional areas of Management as well as provide a solid grounding in Economics for B.B.A. students interested in further study in Economics.

Program Requirements
The Specialist Program in Economics for Management Studies requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

Note: A single course may only be used to fulfill one of the following requirements:

1. 8.5 full credits in Economics for Management Studies, including
   ECMA04H3, ECMA06H3, ECBM02H3, ECBM06H3, ECBM11H3, ECBM12H3, ECMC02H3, ECMC06H3, ECMC11H3,
   ECMC10H3, ECMC13H3, ECMC14H3, ECMC50H3 and two additional full credits in Economics for Management Studies
   including at least one at the C-level (not including ECMC91H3, ECMC92H3, ECMC93H3).

2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3].

3. MGTA03H3, MGTB04H3, MGTB05H3, MGTB06H3, [[MGTB23H3 & MGTB29H3] or MGTB27Y3],
   [MGTB09H3 or (MGTC03H3)], MGTB90H3, MGTB90H3, MGTB90H3, MGTC74H3.

4. At least 0.5 credit of courses emphasizing strategic management, chosen from ECMC43H3, MGTC19H3, MGTC31H3,
   MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3,
   MGTD40H3, [MGTD54H3 or (MGTC10H3)]

5. At least 1.0 full credit from courses within the Department of Humanities.

Note: The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

Students should be aware that the mathematics requirement implies that Grade 12 Calculus is a prerequisite for entry to this Program.
Further, students who are considering graduate work in Economics should be aware that they should accumulate considerably more mathematics than the minimum required; they should consult the Supervisor of Studies in Economics for details.

SPECIALIST PROGRAM IN MANAGEMENT (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: S. Ahmed  E-mail: management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option is designed to give students a broad exposure to all functional areas of Management as well as a solid grounding in Economics. Co-op students should see the section regarding work term requirements for specific details on courses required before each work term.

Program Requirements
The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

Note: A single course may only be used to fulfill one of the following requirements:

1. MGTA03H3, MGTA04H3, MGTB03H3, MGTB04H3, MGTB05H3, MGTB06H3, [MGTB09H3 or (MGTC03H3)], [MGTB27Y3 or [MGTB23H3 & MGTC29H3]], MGTB90H3, MGTC09H3, MGTC90H3, MGTC74H3 & 1.0 full credit of D-level MGT or ECM courses.

2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3]

3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECMA04H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC34H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or (MGTC10H3)]

4. ECMA04H3, ECMA06H3, ECMB02H3, ECMB06H3, ECMB11H3, ECMB12H3 and 1 full credit of C-level Economics for Management Studies courses (not including ECMC91H3, ECMC92H3, ECMC93H3).

5. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

Note: The remaining courses needed to complete the degree requirement of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

SPECIALIST PROGRAM IN MANAGEMENT AND ACCOUNTING (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: S. Ahmed  Email: management-supervisor-studies@utsc.utoronto.ca

The Accounting Specialist program which has a Co-op option is designed for the individual who is interested in acquiring a concentrated core of accounting and related knowledge required to become a professional accountant. It provides a solid foundation to prepare students to become Chartered Accountants, Certified Management Accountants and Certified General Accountants after graduation. In addition, the Specialist program provides students the personal and professional attributes necessary to build a successful career in senior management.

The Accounting Specialist program encompasses topics such as introductory to advanced financial and managerial accounting, assurance, taxation, economics, and finance, along with a range of more advanced electives which covers topics and competencies that incorporate critical thinking and ethical decision making.

Program Requirements
The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

Note: A single course may only be used to fulfill one of the following requirements:

1. MGTA03H3, MGTA04H3, MGTB03H3, MGTB04H3, MGTB05H3, MGTB06H3, [MGTB09H3 (MGTC03H3)], [MGTB27Y3 or [MGTB23H3 & MGTC29H3]], MGTB90H3, MGTC09H3, MGTC90H3, MGTC74H3

2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3]

3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECMA04H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC34H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or (MGTC10H3)]

4. ECMA04H3, ECMA06H3, ECMB02H3, ECMB06H3, ECMB11H3, ECMB12H3 and 1 full credit of C-level Economics for Management Studies courses (not including ECMC91H3, ECMC92H3, ECMC93H3).

5. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

Note: The remaining courses needed to complete the degree requirement of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

NOTES:
Chartered Accountancy (CA) requirements: For students interested in the CA designation, in addition to the specified courses
The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

Note: A single course may only be used once to fulfill one of the following requirements:

The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

**Certified Management Accountancy (CMA) requirements:** For students interested in the CMA designation, in addition to the specified courses in item 1 above, the following additional courses must be completed: MGTC17H3, MGTD50H3, MGTD61H3, MGTD62H3 & one of MGTD54H3 (formerly MGTC10H3), MGTD55H3, MGTD56H3

**Certified General Accountants (CGA) requirements:** Students who wish to be eligible for a “block transfer” of credits into CGA PACE studies must also complete: MGTC17H3, [MGTD54H3 or MGTC10H3], MGTD50H3 & MGTD55H3.

The advanced auditing courses (MGTD61H3 & MGTD62H3) are part of post graduate CGA professional studies and students who take these courses as part of their degree studies should be aware that they will still be required to write CGA challenge exams.

**Other:** Regardless of which professional accounting path students are interested in pursuing, they are strongly advised to refer to the web-sites of the three professional accounting organizations to be aware of their specified minimum grade requirements and any changes that may occur between updates of the description of this program in the UTSC Calendar.

**SPECIALIST PROGRAM IN MANAGEMENT AND HUMAN RESOURCES (BACHELOR OF BUSINESS ADMINISTRATION)**

**Supervisor:** S. Ahmed  
**Email:** management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option builds on the core of the Specialist in Management Program and offers a deeper and wider coverage of Finance topics. The Program courses will equip students with a comprehensive understanding of financial issues and concepts, and with a firm mastery of methodologies and problem solving skills required in modern-day finance.

**Program Requirements**

The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

**Note:** A single course may only be used once to fulfill one of the following requirements:

1. MGTa03H3, MGTa04H3, MGTb03H3, MGTb04H3, MGTb05H3, MGTb06H3, [MGTb09H3 or (MGTC03H3)], [MGTb27Y3 or [MGTb23H3 & MGTb29H3]], MGTb90H3, MGTC90H3, MGTC74H3
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H/A37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECMC43H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or MGTC10H3]]
4. ECMa04H3, ECMa06H3, ECOMB02H3, ECOMB06H3, ECOMB11H3, ECOMB12H3 & 1 full credit of C-level Economics for Management Studies courses (not including ECOM91H3, ECOMC92H3, ECOMC93H3).
5. MGTC71H3 & MGTD75H3
6. At least 2.0 full credits from MGTC70H3, MGTC76H3, MGTC77H3, MGTD71H3, MGTD72H3, MGTD73H3, MGTD78H3, MGTD77H3, ECOMC48H3
7. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

**Note:** The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

**SPECIALIST PROGRAM IN MANAGEMENT AND HUMAN RESOURCES (BACHELOR OF BUSINESS ADMINISTRATION)**

**Supervisor:** S. Ahmed  
**Email:** management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option is designed to give students a broad exposure to all functional areas of Management as well as specialization in the area of Human Resource Management (HRM). HRM is an area that encompasses topics such as recruitment and selection, performance management, compensation, and industrial relations. By taking a B.B.A. with a specialization in the area of Human Resource Management (HRM), you will cover the nine required CHRP courses.

**Program Requirements**

The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

**Note:** A single course may only be used once to fulfill one of the following requirements:

1. MGTa03H3, MGTa04H3, MGTb03H3, MGTb04H3, MGTb05H3, MGTb06H3, [MGTb09H3 or (MGTC03H3)], [MGTb27Y3 or [MGTb23H3 & MGTb29H3]], MGTb90H3, MGTC90H3, MGTC74H3
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H/A37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECOMC43H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or MGTC10H3]]
4. ECOMA04H3, ECOMA06H3, ECMC48H3, [MGTD54H3 or (MGTC10H3)] & [MGTD55H3, MGTD56H3]

: Regardless of which professional accounting path students are interested in pursuing, they are strongly advised to refer to the web-sites of the three professional accounting organizations to be aware of their specified minimum grade requirements and any changes that may occur between updates of the description of this program in the UTSC Calendar.

S. Ahmed
management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option builds on the core of the Specialist in Management Program and offers a deeper and wider coverage of Finance topics. The Program courses will equip students with a comprehensive understanding of financial issues and concepts, and with a firm mastery of methodologies and problem solving skills required in modern-day finance.

**Program Requirements**

The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

**Note:** A single course may only be used once to fulfill one of the following requirements:

1. MGTa03H3, MGTa04H3, MGTb03H3, MGTb04H3, MGTb05H3, MGTb06H3, [MGTb09H3 or (MGTC03H3)], [MGTb27Y3 or [MGTb23H3 & MGTb29H3]], MGTb90H3, MGTC90H3, MGTC74H3
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H/A37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECOMC43H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or MGTC10H3]]
4. ECOMA04H3, ECOMA06H3, ECMC48H3, [MGTD54H3 or (MGTC10H3)] & [MGTD55H3, MGTD56H3]

: Regardless of which professional accounting path students are interested in pursuing, they are strongly advised to refer to the web-sites of the three professional accounting organizations to be aware of their specified minimum grade requirements and any changes that may occur between updates of the description of this program in the UTSC Calendar.

S. Ahmed
management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option builds on the core of the Specialist in Management Program and offers a deeper and wider coverage of Finance topics. The Program courses will equip students with a comprehensive understanding of financial issues and concepts, and with a firm mastery of methodologies and problem solving skills required in modern-day finance.

**Program Requirements**

The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

**Note:** A single course may only be used once to fulfill one of the following requirements:

1. MGTa03H3, MGTa04H3, MGTb03H3, MGTb04H3, MGTb05H3, MGTb06H3, [MGTb09H3 or (MGTC03H3)], [MGTb27Y3 or [MGTb23H3 & MGTb29H3]], MGTb90H3, MGTC90H3, MGTC74H3
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H/A37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECOMC43H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or MGTC10H3]]
4. ECOMA04H3, ECOMA06H3, ECMC48H3, [MGTD54H3 or (MGTC10H3)] & [MGTD55H3, MGTD56H3]

: Regardless of which professional accounting path students are interested in pursuing, they are strongly advised to refer to the web-sites of the three professional accounting organizations to be aware of their specified minimum grade requirements and any changes that may occur between updates of the description of this program in the UTSC Calendar.

S. Ahmed
management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option builds on the core of the Specialist in Management Program and offers a deeper and wider coverage of Finance topics. The Program courses will equip students with a comprehensive understanding of financial issues and concepts, and with a firm mastery of methodologies and problem solving skills required in modern-day finance.
4. ECMA04H3, ECMA06H3, ECMB02H3, ECMB06H3, ECMB11H3, ECMB12H3 & 1 full credit of C-level Economics for Management Studies courses (not including ECMC91H3, ECMC92H3, ECMC93H3)
6. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

Note: The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

SPECIALIST PROGRAM IN MANAGEMENT AND INFORMATION TECHNOLOGY (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: S. Ahmed E-mail: management-supervisor-studies@utsc.utoronto.ca

This program which has a co-op option is designed to give students a broad exposure to all functional areas of Management as well as a solid grounding in Computer Science. Please see the section regarding work term requirements for specific details on courses required before each work term.

Program Requirements
The Program requires the completion of the following minimum requirements as part of a twenty credit degree B.B.A.

Note: A single course may only be used to fulfill one of the following requirements:

1. MGTA03H3, MGTA04H3, ECMA04H3, ECMA06H3, CSCE08H3, CSCE48H3, CSCE67H3
2. [MATA32H3 & MATA33H3] or [MATA30H3/A31H3 & MATA37H3]
4. MGTA09H3 & MGTC09H3
5. CSCE01H3, CSCE20H3, MGTA09H3, MGTC74H3
6. CSCE03H3 or MGTC59H3
7. 1.0 credits at the D-level in MGT, ECM or CSC courses.

Note: The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

SPECIALIST PROGRAM IN MANAGEMENT AND MARKETING (BACHELOR OF BUSINESS ADMINISTRATION)
Supervisor: S. Ahmed Email: management-supervisor-studies@utsc.utoronto.ca

The Specialist Program in Management and Marketing which has a Co-op option gives students the perspective of the overall organization and beyond. In addition to the Company focus, Marketing also ensures that students take an external orientation by having an in-depth understanding of the Competition and the Consumer. While developing a good understanding of all the issues involved in developing Marketing Strategy, the student will learn to implement the tools of Marketing Tactics.

Program Requirements
The Program requires the completion of the following minimum requirements as part of a twenty-credit degree B.B.A.

Note: A single course may only be used to fulfill one of the following requirements:

1. MGTA03H3, MGTA04H3, MGTA05H3, MGTA06H3, MGTA07H3, MGTA08H3, MGTA09H3 (or (MGTC03H3)), [MGTA27Y3 or [MGTA24H3 & MGTA29H3]], MGTA90H3, MGTC09H3, MGTC74H3
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3/A31H3 & MATA35H3/A36H3/A37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from ECMC43H3, MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC59H3, MGTD40H3, [MGTD54H3 or (MGTC10H3)]
4. ECMA04H3, ECMC06H3, ECOMB02H3, ECOMB06H3, ECOMB11H3, ECOMB12H3 & 1 full credit of C-level Economics for Management Studies courses (not including ECMC91H3, ECMC92H3, ECMC93H3).
5. 6 of the following courses: MGTC12H3, MGTC13H3, MGTC14H3, MGTC21H3, MGTD13H3, MGTD07H3, MGTD30H3
6. MGTC05H3, (MGTD20H3)
7. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

Note: The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above. In addition to the above program requirements, we
also offer equally interesting Marketing elective courses, Judgment and Decision Making [MGTC20H3] & Marketing in the Information Age [MGTD06H3].

SPECIALIST PROGRAM IN STRATEGIC MANAGEMENT (BACHELOR OF BUSINESS ADMINISTRATION)

**Supervisor:** S. Ahmed  
**Email:** management-supervisor-studies@utsc.utoronto.ca

This Program which has a co-op option is designed to give students a broad exposure to all functional areas of Management as well as a solid grounding in Strategic Management. It covers the direction and coordination of private sector, public sector, or non-profit sector organizations. The program requires a grounding in strategic management while providing a variety of elective courses to appeal to students interested in any one of the three sectors.

**Program Requirements**

The Program requires the completion of the following minimum requirements as part of a twenty credit degree B.B.A.

**Note:** A single course may only be used once to fulfill one of the following requirements:

1. MGTA03H3, MGTA04H3, MGTB03H3, MGTB04H3, MGTB06H3, [MGTB09H3 or (MGTC03H3)], [MGTB27Y3 or [MGTB23H3 & MGTB29H3]], MGTB90H3, MGTC90H3, MGT09H3, MGTC74H3 & one additional half-credit at the D-level in either MGT or ECM.
2. [MATA32H3 & MATA33H3] strongly recommended or [MATA30H3 & MATA35H3 & MATA37H3]
3. At least 0.5 credit of courses emphasizing strategic management, chosen from MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC59H3, MGTD40H3, MGTD54H3 (MGTC10H3), ECMC43H3
4. ECMA04H3, ECMA06H3, ECMC31H3, ECMC32H3, ECMC43H3
5. 1 full credit (2 courses) from MGTC41H3, MGTC42H3 or MGTC45H3
6. 0.5 full credit (1 course) chosen from the following courses: MGTC19H3, MGTC31H3, MGTC32H3, MGTC33H3, MGTC35H3, MGTC38H3, MGTC39H3, MGTC41H3, MGTC42H3, MGTC45H3, MGTC55H3, MGTC56H3, MGTC59H3, MGTD40H3, MGTD45H3, [MGTD54H3 or (MGTC10H3)], ECMC43H3
7. MGTD47H3
8. In addition to the program-required 1.0 credit in Mathematics, all students in this program must complete at least 2.5 credits from outside MGT/ECM. The math courses will meet the breadth requirement in Quantitative Reasoning while the program-required Economics courses (ECMA04H3 and ECMA06H3) will meet the breadth requirement in Social and Behavioural Sciences. The remaining three breadth categories can be fulfilled by any of the 2.5 credits outside MGT/ECM.

**Note:** The remaining courses needed to complete the degree requirements of 20 credits can be chosen either within or outside the Department of Management in accordance with the student's interest. In choosing courses, students should keep in mind the need to complete the general B.B.A. degree requirements referred to above.

**CERTIFICATE IN BUSINESS**

**Website:** [www.utsc.utoronto.ca/mgmt/business_cert.html](http://www.utsc.utoronto.ca/mgmt/business_cert.html)

The Department of Management also offers a Certificate Program for non-degree students. (See the Degrees section of this Calendar for details.) Non-degree students interested in this Certificate Program should visit the Department website.

**MGTA03H3 Introduction to Management I**

This course serves as an introduction to the process of management, including planning, organizing and the role of management within the broader business community. This course should be taken before any other MGT courses.

Exclusion: (COM110H), MGM101H, RSM100Y  
Breadth Requirement: Social & Behavioural Sciences

**MGTA04H3 Introduction to Management II**

This course serves as an introduction to the functional areas of business, including accounting, finance, production and marketing. It builds on the material covered in MGTA03H3.

Prerequisite: MGTA03H3  
Exclusion: MGM101H, MGM102H, RSM100Y  
Breadth Requirement: Social & Behavioural Sciences

**MGTB03H3 Management Accounting**

An introduction to management and cost accounting with an emphasis on the use of accounting information in managerial decision-making. Topics include patterns of cost behaviour, transfer pricing, budgeting and control systems.

Prerequisite: [[ECMA04H3 & ECMA06H3] or [ECMA01H3 & ECMA05H3]] & MGTB05H3  
Exclusion: MGT223H, MGT232H, RSM222H, RSM224H, VPAB13H3  
Enrolment Limits: 60  
Breadth Requirement: Social & Behavioural Sciences

**MGTB04H3 Principles of Marketing**

An introduction to basic concepts and tools of marketing designed to provide students with a conceptual framework for the analysis of marketing problems. The topics include an examination of buyer behaviour, market segmentation; the basic elements of the marketing mix. Enrolment is limited to students registered in Programs requiring this course.

Prerequisite: MGTA03H3 & MGTB04H3  
Exclusion: (MGT252H), RSM250H  
Enrolment Limits: 60  
Breadth Requirement: Social & Behavioural Sciences

**MGTB05H3 Financial Accounting I**

Together with MGTB06H3, this course provides a rigorous introduction to accounting techniques and to the principles
the preparation of financial statements is addressed from the point of view of both preparers and users of financial information. The techniques underlying these techniques. The preparation of financial statements is addressed from the point of view of both preparers and users of financial information. Prequisite: MGTA03H3 & MGTA04H3. Note: Students admitted into the Management Program directly from high school and students registered in programs requiring this course may take it in the same session as either MGTA03H3 or MGTA04H3. Exclusion: MGT120H, MGT201H, MGT220H, RSM100Y, RSM220H, VPAB13H3 Enrolment Limits: 60 Breadth Requirement: Social & Behavioural Sciences

**MGTB06H3 Financial Accounting II**

This course is a continuation of MGTB05H3. Students are encouraged to take it immediately after completing MGTB05H3. Technical topics include the reporting and interpretation of equity issues, assets and equities, cash flow statements and analysis. Through cases, choices of treatment and disclosure are discussed, and the development of professional judgment is encouraged. Prerequisite: MGTB05H3 Exclusion: MGT120H, MGT201H, MGT220H, RSM220H, VPAB13H3 Enrolment Limits: 60 Breadth Requirement: Social & Behavioural Sciences

**MGTB07H3 Principles of International Marketing**

An introduction to basic marketing concepts and tools that provide students with a conceptual framework for analyzing marketing problems facing global managers. Topics are examined from an international marketing perspective and include: buyer behaviour, market segmentation, and basic elements of the marketing mix. Prerequisites: MGTA03H3 & MGTA04H3 Exclusions: MGTB04H3, RSM250H, MGT252H Enrolment Limits: 40 Breadth Requirement: Social and Behavioural Sciences

**MGTB09H3 Principles of Finance**

An introduction to basic concepts and analytical tools in financial management. Building on the fundamental concept of time value of money, the course will examine stock and bond valuations and capital budgeting under certainty. Also covered are risk-return trade-off, financial planning and forecasting, and long-term financing decisions. Prerequisites: ECMB11H3 & MGTB05H3 Exclusion: ACT040H3, ACT240H, (MGTC03H3), (MGT331Y), (MGT213Y) Enrolment Limits: 60 Breadth Requirement: Social and Behavioural Sciences

**MGTB22H3 International Human Resources**

This course examines how human resource practices are different across cultures and how they are affected when they “go global.” It examines how existing organizational structures and human resource systems need to adapt to globalization in order to succeed domestically and internationally. Prerequisites: MGTB25H3 Exclusions: MGTC22H3, RSM460H, (MGT460H) Enrolment Limits: 40 Breadth Requirement: Social and Behavioural Sciences

**MGTB23H3 Managing People in Organizations**

An introduction to micro-organizational behaviour theories from both conceptual and applied perspectives. Students will examine a variety of theories and concepts to help them develop an understanding of the behaviour of individuals in all types of organizational settings. Topics covered include: individual differences, motivation and job design, work attitudes, decision making, leadership. Prerequisite: MGTA03H3 & MGTA04H3 Exclusion: MGTB27Y3, MGT262H, RSM260H, PSY332H Enrolment Limits: 60 Breadth Requirement: Social & Behavioural Sciences

**MGTB25H3 International Organizational Behaviour**

Examines how and why people from different cultures differ in their workplace behaviours, attitudes, and how they behave in teams. Uses discussion and case studies to enable students to understand how employees who relocate or travel to a different cultural context can manage and work in that context. Prerequisites: MGTA03H3 & MGTA04H3 Exclusions: MGTB23H3 & MGTB25H3 & MGTB29H3 Enrolment Limits: 60 Breadth Requirement: Social and Behavioural Sciences

**MGTB27Y3 Managing People and Groups in Organizations**

An introduction to micro- and macro-organizational behaviour theories from both conceptual and applied perspectives. Students will develop an understanding of the behaviour of individuals and groups in different organizational settings. Topics covered include: individual differences, motivation and job design, organizational design, culture, and innovation, group dynamics and inter-group relations. Prerequisite: MGTA03H3 & MGTA04H3 Exclusion: MGTB23H3, MGTB29H3, PSY332H, RSM260H Enrolment Limits: 60 Breadth Requirement: Social and Behavioural Sciences

**MGTB29H3 Managing Groups and Organizations**

An introduction to the practical and theoretical aspects of macro-organizational behaviour. Building on MGTB23H3, students will be introduced to theoretical and practical aspects of macro-organizational levels of behaviour that tackle management issues at group and organizational levels of analysis. Topics covered include: organizational design, culture, innovation, power and politics, group dynamics and organizational change. Prerequisite: MGTB23H3 Exclusion: MGTB27Y3, MGT262H, RSM260H Enrolment Limits: 60 Breadth Requirement: Social and Behavioural Sciences

**MGTB90H3 Business Communication Skills**

This course focuses on honing core skills for effective business communication. Students will attend lectures each week given by experts in the field and then practice specific written and oral skills in smaller laboratory groups. This course will cover topics such as persuasive communication, handling the media, and providing performance feedback. Prerequisite: MGTA03H3 & MGTA04H3 Exclusion: (MGTC24H3) Breadth Requirement: Social and Behavioural Sciences
MGTC05H3 Marketing Management
This course builds on the introductory course in marketing and takes a pragmatic approach to develop the analytical skills required of marketing managers. The course is designed to help improve skills in analyzing marketing situations, identifying market opportunities, developing marketing strategies, making concise recommendations, and defending these recommendations.
Prerequisite: MGTB04H3
Exclusion: (MGTD20H3)
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC06H3 Intermediate Management Accounting
An examination of various cost accumulation and performance evaluation systems and decision-making tools. Topics include job and process costing, flexible budgeting, and variance analysis and cost allocations.
Prerequisite: MGTB03H3
Exclusion: MGT323H, RSM322H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC07H3 Intermediate Financial Accounting I
Together with MGTC08H3, this course examines financial reporting in Canada. Through case analysis and the technical material covered, students will build on their knowledge covered in MGTB05H3, MGTB06H3 and, to a lesser extent, MGTB03H3.
Prerequisite: Completion of 8.0 full credits including MGTB03H3 & MGTB06H3
Exclusion: MGT224H, MGT322H, RSM221H, RSM320H
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC08H3 Intermediate Financial Accounting II
This course is a continuation of MGTC07H3. Students will further develop their case writing, technical skills and professional judgment through the study of several complex topics. Topics include leases, bonds, pensions, future taxes, and earnings per share.
Prerequisite: MGTC07H3
Exclusion: MGT224H, MGT322H, RSM221H, RSM320H
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC09H3 Intermediate Finance
This course covers mainstream finance topics. Besides a deeper examination of certain topics already covered in MGTB09H3, the course will investigate additional subjects such as working capital management, capital budgeting under uncertainty, cost of capital, capital structure, dividend policy, leasing, mergers and acquisitions, and international financial management.
Prerequisite: MGTB09H3 or (MGTC03H3)
Exclusion: (MGTC31Y), MGTC337Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC10H3 Intermediate Income Taxation
This course covers mainstream income taxation topics. Besides a deeper examination of certain topics already covered in MGTB10H3, the course will investigate additional subjects such as working capital management, capital budgeting under uncertainty, cost of capital, capital structure, dividend policy, leasing, mergers and acquisitions, and international financial management.
Prerequisite: MGTB10H3 or (MGTC03H3)
Exclusion: (MGTC31Y), MGTC337Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC11H3 Management Information Systems
This course is intended to help students understand the information systems that are a critical component of modern organizations. The course covers the technology, design, and application of data processing and information systems, with emphasis on managerial judgment and decision-making.
Prerequisite: MGTB09H3 & ([MGTB23H3 & MGTB29H3] or MGTB27Y3)
Exclusion: MGT371H, RSM327H
Enrolment Limit: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC12H3 Advertising: From Theory to Practice
An introduction to the basic communication tools used in planning, implementing and evaluating promotional strategies. The course reviews basic findings of the behavioural sciences dealing with perception, personality, psychological appeals, and their application to advertising as persuasive communication. Students will gain experience preparing a promotional plan for a small business. The course will rely on lectures, discussions, audio-visual programs, and guest speakers from the local advertising industry.
Prerequisite: MGTA03H3 & MGTA04H3 & MGTB04H3
Exclusion: (MGTD12H3)
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC13H3 Pricing Strategy
Pricing right is fundamental to a firm’s profitability. This course draws on microeconomics to develop practical approaches for optimal pricing decision-making. Students develop a systematic framework to think about, analyze and develop strategies for pricing right. Key issues covered include pricing new product, value pricing, behavioural issues, and price segmentation.
Prerequisite: MGTB04H3 & ECMB02H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC14H3 Sales and Distribution Management
Sales and distribution are critical components of a successful marketing strategy. The course discusses key issues regarding sales force management and distribution structure and intermediaries. The course focuses on how to manage sales force rather than how to sell, and with the design and management of an effective distribution network.
Prerequisite: MGTB04H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC16H3 Canadian Income Taxation I
The first of two courses in Canadian income taxation. It provides the student with detailed instructions in income taxation as it applies to individuals and small unincorporated businesses. Current tax laws are applied to practical problems and cases. Covers employment income, business and property income, and computation of tax for individuals.
Prerequisite: Completion of at least ten full credits including MGTB05H3 & MGTB06H3 & MGTB03H3.
Exclusion: (MGTC16H3)
Recommended Preparation: MGTC07H3 is highly recommended.
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
MGTC17H3 Canadian Income Taxation II
This course is designed to give the student an understanding of the more complex issues of federal income taxation, by applying current tax law to practical problems and cases. Topics include: computation of corporate taxes, corporate distributions, corporate re-organizations, partnerships, trusts, and individual and corporate tax planning.
Prerequisite: MGTC16H3
Exclusion: MGTC29H3, MGTC29H4
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC19H3 New Ways of Work: Consulting, Contracting & Freelancing
With the changing nature of employment, students are increasingly likely to find careers involving a series of short-term contracts or project related assignments. The successful manager of the future will not have "jobs", but portfolios of adaptable and transferable skills. The course examines what consultants do, and why organizations engage consultants.
Prerequisite: MGTC09H3 & [MGTC23H3, MGTC29H3] or MGTC27Y3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC20H3 Judgement and Decision Making
This course combines the elements of behavioural research as applied to consumers' decision making models and how this can be used to predict decisions within a marketing and consumer oriented environment. It also delves into psychology, economics, statistics, and other disciplines.
Prerequisite: MGTC04H3
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTC21H3 Product Management and Branding
Managing products and brands is one of the most important functions of a successful marketer. Product lines and extensions and other issues of product portfolio will be covered in this course. This course also examines issues about brand equity, its measurement and contemporary challenges faced by marketers about branding product management.
Prerequisite: MGTC04H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC22H3 Human Resource Management
An introduction to current human resource practices in Canada, emphasizing the role of Human Resource Management in enhancing performance, productivity and profitability of the organization. Topics include recruitment, selection, training, career planning and development, diversity, and human rights issues in the workplace.
Prerequisite: MGTC23H3 & MGTC29H3 or MGTC27Y3
Exclusion: MGTC46H3, MGTC46H4
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC23H3 Diversity in the Workplace
Examines the nature and effects of diversity in the workplace. Drawing on theories and research from psychology, the course will examine topics like stereotyping, harassment, discrimination, organizational climate for diversity, conflict resolution within diverse teams, and marketing to a diverse clientele.
Prerequisite: [MGTC23H3 & MGTC29H3] or MGTC27Y3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC31H3 The Legal Environment of Business I
An introduction to the legal system and its effects on business entities. The course includes an examination of the Canadian court structure and a discussion of the various forms of business ownership, tort law, contract law, and property law.
Prerequisite: Completion of at least ten full credits including MGTC05H3 & MGTC06H3
Exclusion: MGTC39H3, RSM325H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC32H3 The Legal Environment of Business II
This course further examines the issues raised in Legal Environment of Business I. It focuses on relevant areas of law that impact business organizations such as consumer protection legislation, and agency and employment law, and it includes a discussion of laws affecting secured transactions and commercial transactions.
Prerequisite: MGTC31H3
Exclusion: MGTC39H4, RSM325H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC33H3 Event and Sponsorship Management
Event and Sponsorship Management involves the selection, planning and execution of specific events as well as the management of sponsorship rights. This will involve the integration of management skills, including finance, accounting, marketing, and organizational behaviour, required to produce a successful event.
Prerequisite: Completion of at least ten full credits in the B.B.A. program
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC34H3 Accounting Issues in International Business
An overview of international accounting and financial reporting practices with a focus on accounting issues related to international business activities and foreign operations. Understanding the framework used in establishing international accounting standards, preparation and translation of financial statements, transfer pricing and taxation, internal and external auditing issues and discussion of the role of accounting and performance measurement for multinational corporations.
Prerequisite: MGTC06H3 & MGTC03H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC35H3 Narratives on Management and Organization
Through the analysis of fiction and non-fiction narratives, particularly film, dealing with managers in both private and public sector organizations, the course explores the ethical dilemmas, organizational politics, and career choices that managers can expect to face.
Prerequisite: [MGTB23H3 & MGTB29H3] or MGTB27Y3
Enrolment Limits: 35
Breadth Requirement: Arts, Literature & Language

**MGTC36H3 Management Communications**

In this course students will learn skills and techniques to communicate effectively in an organization. Creativity, innovation and personal style will be emphasized. Students will build confidence in their ability to communicate effectively in every setting. Those completing this course will experience a high degree of personal satisfaction.

Prerequisite: MGTB23H3 or MGTB27Y3 or MGTB25H3
Enrolment Limits: 40
Breadth Requirement: Arts, Literature & Language

**MGTC37H3 Introduction to Case Analysis Techniques**

This course focuses on the theory and techniques of analyzing and writing business cases. The main focus is to assist students in developing their conceptual and analytical skills by applying the theory learned from each major area of management studies to practical situations. Critical thinking and problem solving skills are developed through extensive use of case analysis.

Prerequisite: MGTB03H3 & [MGTB23H3 & MGTB29H3] or MGTB27Y3
Corequisite: MGTB04H3 & MGTB06H3
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

**MGTC38H3 Entrepreneurship**

This course focuses on the skills required and issues - personal, financial, sales, operational, personnel - entrepreneurs face as their smaller business grows from start-up to maturity. The course should interest those who wish to own, or seek careers with, an entrepreneurial business in either the "old" or "new" economies.

Prerequisite: MGTB03H3 & MGTB09H3 & MGTB23H3
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC39H3 New Venture Creation and Planning**

Aimed at students interested in launching their own entrepreneurial venture. The core of the course is the development of a complete business plan which details the student's plans for the venture's initial marketing, finance and growth. This course provides a framework for the evaluation of the commercial potential of business ideas.

Prerequisite: MGTB04H3 & MGTB09H3 & MGTB06H3
Exclusion: MGT493H, RSM493H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC41H3 Corporate Strategy**

 Begins with an examination of the concept of business mission. Students are then challenged to evaluate the external and industry environments in which businesses compete, to identify sources of competitive advantage and value creation, and to understand and evaluate the strategies of active Canadian companies.

Prerequisite: [MGTB29H3 or MGTB27Y3] & [ECMB02H3 or ECMB06H3]
Exclusion: MGT492H, RSM392H, VPAC13H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC42H3 Public Management**

An introduction to key public sector management processes: strategic management at the political level, planning, budgeting, human resource management, and the management of information and information technology. Makes use of cases, and simulations to develop management skills in a public sector setting.

Prerequisite: [MGTB23H3 or MGTB27Y3] or [POLB50H3 & POLB52H3]
Enrolment Limits: 35
Breadth Requirement: Social & Behavioural Sciences

**MGTC44H3 International Business Management**

Course deals with political risk & contingency planning, human threats and weather extremes, NGOs (WTO, IMF & World Bank), Gov't influences - dumping, tariffs, subsidies. Cultures around the world. Foreign exchange issues. Export financing for int'l business. Int'l Collaborative Arrangements. Pro-Active/Re-Active reasons for companies going int'l.

Guest speakers.

Prerequisite: [MGTB23H3 & MGTB29H3] or MGTB27Y3
Exclusion: MGT491H, RSM490H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC45H3 The Changing World of Business - Government Relations**

How regulation, privatization and globalization are affecting today's managers.

Most major management issues and business opportunities involve government (domestic or foreign) at some level - whether as lawmaker, customer, partner, investor, tax-collector, grant-giver, licensor, dealmaker, friend or enemy. This course provides students with an understanding of the issues and introduces some of the skills necessary to successfully manage a business's relationship with government.

Prerequisite: MGTA03H3 & MGTA04H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC46H3 Managerial Perspectives in a Global Economy**

This course discusses Managerial perspectives on the influences of Globalization, Sovereignty and Sustainable Development. Extensive discussions of int'l business ethics and social-cultural considerations. Foreign Direct Investment, Outsourcing, Global Manufacturing and Supply Chain Management. Guest speakers.

Prerequisite: ECMB02H3 & ECMB06H3
Exclusion: ECMC93H3, ECO230Y, ECO364H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

**MGTC52H3 Business Negotiation**

An introduction to the theory and practice of negotiation in business. This course develops approaches and tactics to use in different forums of negotiation, and an introduction to traditional and emerging procedures for resolving disputes. To gain practical experience, students will participate in exercises which simulate negotiations.
MGTC53H3 Introduction to Industrial Relations
An overview of the industrial system and process. The course will introduce students to: industrial relations theory, the roles of unions and management, law, strikes, grievance arbitration, occupational health and safety, and the history of the industrial relations system. Students will participate in collective bargaining simulations.
Prerequisite: Completion of at least ten full credits including [[ECMA01H3 & ECMA05H3] or [ECMA04H3 & ECMA06H3]] & [MGTA03H3 & MGTA04H3]
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTC55H3 Planning and Budgeting for Public Institutions
The theory and practice of planning and allocating resources in public institutions.
After presenting theories of planning and resource allocation in public institutions, the course will illustrate them by means of case studies of challenges faced by universities and colleges. Instruction will be a combination of lecture, discussion, and case studies.
Prerequisite: MGTB03H3
Enrolment Limits: 20
Breadth Requirement: Social & Behavioural Sciences

MGTC56H3 Educational Finance and Economics
This course is about the financing of schools, colleges, and universities; how resources are raised, how they are allocated and how they are economically justified.
The course is also about connections between investments in education and economic growth, between systems and allocation, between forms of budgets and between funding and performance.
Prerequisite: MGTB03H3
Enrolment Limits: 20
Breadth Requirement: Social & Behavioural Sciences

MGTC59H3 Management Ethics
Increasingly, the marketplace has come to reward -- and government regulators have come to demand -- a sophisticated managerial approach to the ethical problems that arise in business. Topics include ethical issues in international business, finance, accounting, advertising, intellectual property, environmental policy, product and worker safety, new technologies, affirmative action, and whistle-blowing.
Prerequisite: MGTA03H3 & MGTA04H3
Exclusion: PHLB06H3
Enrolment Limits: 60
Breadth Requirement: History, Philosophy & Cultural Studies

MGTC70H3 Personal Financial Management
This course covers goal setting, personal financial statements, debt and credit management, risk management, investing in financial markets, real estate appraisal and mortgage financing, tax saving strategies, retirement and estate planning. The course will benefit students in managing their personal finances, and in their future careers with financial institutions.
Prerequisite: MGTB09H3 or (MGTC03H3)
Exclusion: (MGTD70H3)
Enrolment Limit: 50
Breadth Requirement: Social & Behavioural Sciences

MGTC71H3 Introduction to Derivatives Markets
This course introduces students to the fundamentals of derivatives markets covering futures, swaps, options and other financial derivative securities. Detailed descriptions of, and basic valuation techniques for popular derivative securities are provided. As each type of derivative security is introduced, its applications in investments and general risk management will be discussed.
Corequisite: MGTC09H3
Exclusion: MGT438H, RSM435H
Enrolment Limit: 50
Breadth Requirement: Social & Behavioural Sciences

MGTC74H3 Analysis for Decision-Making
The course develops understanding and practical skills of applying quantitative analysis for making better management decisions. Studies methodologies include linear and integer programming; multicriteria optimization; waiting line models; decision analysis. Methodologies are practiced in a broad range of typical business problems drawn from different areas of management.
Prerequisite: [MATA32H3 & MATA33H3] or (MATA27H3) & ECMB02H3 & [ECMB11H3 & ECMB12H3]
Enrolment Limits: 60
Breadth Requirement: Quantitative Reasoning

MGTC75H3 Operations Management: A Mathematical Approach
An introduction to a broad scope of major strategic and tactical issues in Operations Management. Topics include: project management, inventory management, supply chain management, forecasting, aggregate planning, material requirements planning, production scheduling.
Prerequisite: MGTC74H3
Exclusion: MGT374H, RSM370H
Enrolment Limits: 60
Breadth Requirement: Quantitative Reasoning

MGTC76H3 International Financial Management
This course provides students with a framework for making financial decisions in an international context. It discusses foreign exchange markets, international portfolio investment and international corporate finance. Next to covering the relevant theories, students also get the opportunity to apply their knowledge to real world issues by practicing case studies.
Prerequisite: MGTC09H3
Exclusion: RSM437H, (MGT439H)
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

MGTC77H3 Financial Statement Analysis and Security Valuation
This course introduces the tools and skills required to perform a comprehensive financial statement analysis from a user perspective. Students will learn how to integrate the concepts and principles in accounting and finance to analyze the financial statements and to utilize that information in
earnings-based security valuation.
Prerequisite: MGTC09H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC09H3 Business Leadership Skills
This course will help students develop the critical skills required by today's managers. Topics covered include self-awareness, managing stress and conflict, using power and influence, negotiation, goal setting, and problem-solving. These skills are important for leadership and will enable students to behave more effectively in their working and personal lives.
Prerequisite: MGTB23H3 & MGTB90H3
Exclusion: (MGTC24H3)
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTC091H3 International Leadership Skills
Leaders who work internationally must learn how to customize their leadership competencies to the different cultures in which they practice. By using role plays, simulations, cases and class discussions, students will develop the culturally appropriate leadership skills of articulating a vision, planning and implementing goals, negotiation, and providing effective feedback.
Prerequisites: MGTA03H3 & MGTA04H3, MGTB25H3
Exclusions: MGTB90H3, (MGTC24H3), MGTC90H3
Enrolment Limit: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD01H3 International Business Ethics
In a world that's increasingly globalized internationally and multicultural domestically, an ability to deal with the ethical issues arising in international business is essential to a managerial career. Sample topics: Reconciling the different cultural norms of one's home and host countries, and dealing with issues such as child labour and human rights violations.
Prerequisites: MGTA03H3 & MGTA04H3
Enrolment Limit: 40
Breadth Requirement: History, Philosophy & Cultural Studies

MGTD06H3 Marketing in the Information Age
Prerequisite: MGTB04H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD07H3 Market Research
A decision oriented course, which introduces students to the market research process. Alternative research approaches (exploratory, descriptive, causal), data collection, sampling, analysis and evaluation procedures are discussed. Theoretical and technical considerations in design and execution of market research are stressed. Instruction involves lectures and projects including computer analysis.
Prerequisite: [ECMB11H3 & ECMB12H3] & MGTB04H3
Exclusion: MGT453H, RSM452H
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD13H3 Consumer Behaviour
This course provides an overview of the role of products in the lives of consumers. Drawing on theories from psychology, sociology and economics, the course provides (1) a conceptual understanding of consumer behaviour (e.g. why people buy), and (2) an experience in the application of these concepts to marketing decisions.
Prerequisite: MGTA03H3 & MGTA04H3 & MGTB04H3
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTD14H3 Leadership and Management in the 21st Century
The information age, intense global competition and an increasingly diverse workforce have ushered in the need for a new type of leader. This seminar will draw on empirical research and lessons learned from exceptional leaders to guide students in becoming the kind of leaders that will thrive in the new millennium.
Prerequisite: [MGTB23H3 & MGTB29H3] or MGTB27Y3 & [(MGTC24H3) or MGTC90H3]
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTD15H3 Commercial Dispute Resolution
This course examines the theory and practice of models of dispute resolution for the settlement of commercial conflict. Through readings, classroom lectures and independent research, students will consider alternate dispute resolution models of advanced negotiation, mediation and arbitration as alternatives to traditional court-based litigation.
Prerequisite: Completion of at least 8.0 full credits
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTD19H3 Global Marketing
This course examines the challenge of entering and operating in foreign markets. Topics such as international marketing objectives, foreign market selection, adaptation of products and communication and cultural issues are examined through case discussions and class presentations. The term project is a detailed plan for marketing a specific product to a foreign country.
Prerequisites: MGTB04H3 or MGTB07H3
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

MGTD21H3 Introduction to International Business Law
This course offers an introduction to key topics in the law governing international trade and business transactions, including the law and conventions governing foreign investment and the legal structure of doing business internationally, the international sale and transportation of goods, international finance, intellectual property and international dispute settlement.
Prerequisites: MGTC31H3
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences
MGTD24H3 Occupational Health and Safety Management
Occupational health and safety is a management function, however, many managers are not prepared for this role when they arrive in their first jobs. This course will consider the physical, psychological, social, and legal environments relevant to health and safety in the workplace.
Prerequisite: MGTC22H3
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTD25H3 Human Resources Recruitment and Selection
An in-depth look at recruitment and selection practices in organizations. Students will learn about organizational recruitment strategies, the legal issues surrounding recruitment and selection, how to screen job applicants, and the role of employee testing and employee interviews in making selection decisions.
Prerequisite: MGTC22H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD26H3 Training and Development
This course is designed to teach students about the training and development process. Topics include how training and development fits within the larger organizational context as well as learning, needs analysis, the design and delivery of training programs, on and off-the-job training methods, the transfer of training, and training evaluation.
Prerequisite: MGTC22H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD27H3 Human Resources Planning and Strategy
This course is designed to provide students with an understanding of strategic human resources management and the human resource planning process. Students will learn how to forecast, design, and develop human resource plans and requirements using both qualitative and quantitative techniques.
Prerequisite: MGTC22H3
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD28H3 Compensation
This course is designed to provide students with an understanding of compensation programs and systems. Students will learn how to design and manage compensation and benefit programs; individual and group reward and incentive plans; and how to evaluate jobs and assess employee performance.
Prerequisite: MGTC22H3 Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD30H3 Applied Marketing Models
Marketing is a complex discipline incorporating not only an "art" but also a "science". This course reviews the "science" side of marketing by studying multiple models used by companies. Students will learn how to assess marketing problems and use appropriate models to collect, analyze and interpret marketing data.
Prerequisite: MGTB04H3 & [ECMB11H3 & ECMB12H3]
Exclusion: MGT455H
Enrolment Limits: 30
Breadth Requirement: Quantitative Reasoning

MGTD40H3 Knowledge Management
The course considers skills for managing knowledge assets and intellectual capital: fostering knowledge creation, representing and transferring knowledge and experience, building knowledge networks and communities of practice, managing knowledge assets for a competitive advantage and using information technology to support knowledge management.
Prerequisite: Completion of at least 10 full credits in the B.B.A. program
Enrolment Limits: 30
Breadth Requirement: Social & Behavioural Sciences

MGTD45H3 Intellectual Property Law
This course considers patents, trademarks, copyright and confidential information. Canada's international treaty obligations as well as domestic law will be covered. Policy considerations, such as the patentability of life forms, copyright in an Internet age of easy copying and patents and international development will be included.
Prerequisite: MGTC31H3
Recommended Preparation: 9.5 full credits in addition to the prerequisite.
Breadth Requirement: Social & Behavioural Sciences

MGTD47H3 Senior Seminar in Strategic Management
This course allows 4th year specialists in strategic management to apply their specific skills to several larger, in-depth studies of strategic management issues in open-ended real-world cases. How strategic decisions are made at the higher levels of management with an opportunity to integrate previous training through analyses and presentations.
Prerequisite: Completion of at least eleven full credits with one full credit (2 courses) from MGTC41H3, MGTC42H3 or MGTC45H3.
Enrolment Limits: 20
Breadth Requirement: Social & Behavioural Sciences

MGTD48H3 International Corporate Strategy
International Corporate Strategy examines the analyses and choices that corporations make in an increasingly globalized world. Topics will include: recent trends in globalization, the notion of competitive advantage, the choice to compete through exports or foreign direct investment, and the risks facing multinational enterprises.
Prerequisites: Minimum of 10 FCEs including MGTB06H3, MGTB07H3, MGTB09H3, and MGTB25H3
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

MGTD50H3 Advanced Financial Accounting
An in-depth study of advanced financial accounting topics: long-term inter-corporate investment; consolidation (including advanced measurements and reporting issues); foreign currency translation and consolidation of foreign subsidiaries and non-profit and public sector accounting. This course is critical to the education of students preparing for a career in accounting.
Prerequisite: MGTC07H3 & MGTC08H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
MGTD54H3 Management Control Systems
An examination of how organizations support the implementation of strategy through the design of planning processes, performance evaluation, reward systems and HR policies, as well as corporate culture. Class discussion will be based on case studies that illustrate a variety of system designs in manufacturing, service, financial, marketing and professional organizations, including international contexts.
Prerequisite: MGTC03H3 & [MGTC09H3 or MGTB23H3 & MGTC09H3]
Exclusion: MGTC10H3, RSM422H, MGT428H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD55H3 Controversial Issues in Accounting
Through case analysis and literature review, this seminar addresses a variety of controversial reporting issues, impression management, the politics of standard setting and the institutional context. Topics may include: international harmonization, special purpose entities, whistle-blowing, the environment and social responsibility and professional education and career issues.
Prerequisite: MGTC07H3 & MGTC08H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD56H3 Advanced Accounting Case Analysis
This capstone case analysis course stresses the critical thinking skills required of Management program graduates. Due to its integrative nature, with emphasis on current accounting issues, the course is primarily directed towards accounting students. Cases will strategically include the specific competency areas outlined in the CICA's CA Candidates Competency Map.
Prerequisite: MGTC07H3 & MGTC08H3
Enrolment Limits: 40

MGTD60H3 Auditing
An introduction to the principles and practice of auditing. The course is designed to provide students with a foundation in the theoretical and practical approaches to auditing by emphasizing auditing theory and concepts, with some discussion of audit procedures and the legal and professional responsibilities of the auditor.
Prerequisite: MGTC07H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD61H3 Advanced Auditing
An extension of the study of areas covered in the introductory audit course and will include the application of risk and materiality to more advanced topic areas such as pension and comprehensive auditing. Other topics include special reports, future oriented financial information and prospectuses. This will include a review of current developments and literature.
Prerequisite: MGTD60H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD62H3 Auditing in a Computer Environment
An examination of the problems related to auditing computer system generated financial data, including consideration of risks and exposure, evaluation of controls and audit strategy development. Attention will also be given to computer-assisted audit techniques.
Prerequisite: MGTD60H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD71H3 Advanced Financial Management
This course reinforces and expands upon the topics covered in MGTD09H3 (MGTC09H3) and MGTC09H3. It examines more advanced and complex decision making situations a financial manager faces in such areas as capital budgeting, capital structure, financing, working capital management, dividend policy, leasing, mergers and acquisitions, and risk management.
Prerequisite: MGTC09H3
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

MGTD72H3 Mergers and Acquisitions: Theory and Practice
This course provides a general introduction to the important aspects of M&A, including valuation, restructuring, divestiture, takeover defences, deal structuring and negotiations, and legal issues.
Prerequisite: MGTC09H3
Exclusion: MGT431H, RSM433H
Enrolment Limits: 40
Breadth Requirement: Social & Behavioural Sciences

MGTD73H3 Investor Psychology and Behavioural Finance
This course is designed to help students understand how different psychological biases can affect investor behaviours and lead to systematic mispricing in the financial market. With simulated trading games, students will learn and practice various trading strategies to take advantage of these market anomalies.
Prerequisite: MGTC09H3
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

MGTD75H3 Investments
This course deals with fundamental elements of investments. Basic concepts and techniques are introduced for various topics such as risk and return characteristics, optimal portfolio construction, security analysis, investments in stocks, bonds and derivative securities, and portfolio performance measurements.
Corequisite: MGTC09H3
Exclusion: MGTD330H, RSM330H
Enrolment Limit: 60
Breadth Requirement: Social & Behavioural Sciences

MGTD77H3 Financial Modeling and Trading Strategies
This course integrates finance theories and practice by using financial modeling and simulated trading. Students will learn how to apply the theories they learned and to use Excel and VBA to model complex financial decisions. They will learn how the various security markets work under different simulated information settings.
Corequisite: MGTC71H3 and MGTD75H3
Exclusion: RSM434H
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

**MGTD78H3 Risk Management**
This course develops analytical skills in financial risk management. It introduces techniques used for evaluating, quantifying and managing financial risks. Among the topics covered are market risk, credit risk, operational risk, liquidity risk, bank regulations and credit derivatives.
Prerequisite: MGTC09H3
Exclusion: RSM432H, (MGT432H)
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

**MGTD79H3 International Capstone Case Analysis**
This course focuses on critical thinking and problem solving skills through analyzing, researching and writing comprehensive business cases, and is offered in the final semester of the MIB specialist program. It is designed to provide students the opportunity to apply the knowledge acquired from each major area of management studies to international real-world situations.
Prerequisites: MGTO3H3, MGTO7H3, MGTO2H3, MGTO25H3, MGTO9H3, MGTO01H3, MGTD48H3, and [ECMC61H3 or ECMC62H3]
Enrolment Limit: 40
Breadth Requirement: Social and Behavioural Sciences

**MGTD80H3**

**MGTD81H3**

**MGTD82Y3 Supervised Reading Courses**
These courses are intended for upper level students whose interests are not covered in one of the other Management courses normally offered. The courses will only be offered when a faculty member is available for supervision and to students whose Management performance has been well above average. Students interested in these courses should consult with the Supervisor of Studies for Management well in advance. Students must obtain consent from the supervising instructor and the Department of Management before registering in these courses.

---

**Mathematics**

**Faculty List**

E. W. Ellers, Ph.D. (Hamburg), *Professor Emeritus*
E. Mendelsohn, B.Sc., M.Sc. (Manitoba), Ph.D. (McGill), *Professor Emeritus*
R. W. Sharpe, M.Sc., Ph.D. (Yale), *Professor Emeritus*
J. Friedlander, M.A. (Waterloo), Ph.D. (Penn. State), F.R.S.C., *University Professor*
R.-O. Buchweitz, Ph.D. (Hanover), *Professor*
M. Goldstein, Ph.D. (Tashkent), *Professor*
P. Selick, B.Sc., M.Sc., Ph.D. (Princeton), *Professor*
B. Virag, Ph.D. (Berkeley), *Professor*
J. Scherk, D.Phil. (Oxford), *Associate Professor*
B. Szegedy, Ph.D. (Budapest), *Associate Professor*
L. Goldmakher, Ph.D. (Michigan), *Assistant Professor*
R. Young, B.A. (Simon's Rock), M.Sc., Ph.D. (Chicago), *Assistant Professor*
N. Cheredeko, M.Sc. (Kharkov), Ph.D. (Moscow), *Senior Lecturer*
S. Chrysostomou, M.Sc. (Toronto), *Senior Lecturer*
R. Grinnell, Ph.D. (Queen's), *Senior Lecturer*
X. Jiang, B.Sc., M.Sc., Ph.D. (Glasgow), *Senior Lecturer*
E. Moore, M.A. (Memorial), Ph.D. (Toronto), *Senior Lecturer*
Z. Shahbazi, B.Sc. (Sharif), M.Sc., Ph.D. (Toronto), *Senior Lecturer*

**Associate Chair**: L. C. Jeffrey (416-287-7265)

Our Mathematics began in the ancient Mesopotamian civilizations. The Babylonians already knew much of the mathematics taught traditionally in our schools. Their algebra and geometry was phrased in terms of crops and fields and money. Since the Renaissance, much of mathematics has come from problems in physics and astronomy; for example, calculus arose from problems in mechanics. In turn mathematics has provided the theoretical framework and tools in the Physical Sciences. In the 19th century some parts of mathematics appeared to develop away from their origins in the physical world. To the great surprise of many scientists and mathematicians, some of the "pure" mathematics has turned out to be essential in many aspects of 20th century science. Differential geometry provides the language for general relativity and cosmology, and Hilbert space theory and group representations are the tools for quantum mechanics. Similarly, graph theory, combinatorics and number theory play a major role in computer science. The Specialist and Major Programs in Mathematics is eligible for inclusion in the Co-operative Program in Physical Sciences and in the Concurrent Teacher Education Program (CTEP). Please refer to the Physical Sciences section, the Co-operative Programs section and the Concurrent Teacher Education section of this Calendar for further information. The Supervisor of Studies for the Co-operative programs is S. Chrysostomou (chrysostomou@utsc.utoronto.ca).

**Service Learning and Outreach (Previously known as Science Engagement)**
For experiential learning through community outreach, classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.
SPECIALIST PROGRAM IN MATHEMATICS (SCIENCE)
Supervisor of Studies: E. Moore (416-287-7267) Email: emoore@utsc.utoronto.ca

Program Objectives
This Program provides the student a sound foundation in the main areas of mathematics, and some exposure to computer programming and statistics. It comprises four streams: Comprehensive, Statistics, Teaching, and Design-Your-Own, each serving a more specific goal.

The Comprehensive Stream provides a broad and deep knowledge of mathematics at the undergraduate level. It is the recommended program for students who plan to pursue graduate study in mathematics, but it is also suitable for other career paths.

The Statistics Stream provides greater exposure to statistics, and the areas of mathematics most closely associated with it. This stream prepares students for careers in industry, or for graduate study in certain mathematically-oriented subjects, including statistics and financial mathematics.

The Teaching Stream is intended for students with a serious interest in mathematics but whose career objectives lie in mathematics education at the elementary or secondary level.

The Design-Your-Own Stream allows students to tailor their studies in mathematics to specific interests, with guidance from (and the approval of) the program supervisor.

Program Requirements
The program requirements consist of a core of 14 courses (7 credits), common to all four streams, and additional requirements that depend on the stream, for a total of 25-27 courses (12.5-13.5 credits).

The structure of the programs allows for easy switching between streams until relatively late. Consequently, these programs should not be viewed as rigidly separated channels feeding students to different career paths, but as a flexible structure that provides guidance to students in their course selection based on their broad (but possibly fluid) interests.

Core (7 credits)
1. Writing Requirement: (0.5 credits) (*)
   (*) It is recommended that this requirement be satisfied by the end of the second year.

2. A-Level Courses (2 credits)
   MATA23H3 Linear Algebra I
   MATA31H3 Calculus I for Mathematical Sciences
   MATA37H3 Calculus II for Mathematical Sciences
   CSCA08H3 Introduction to Computer Programming

3. B-Level Courses (3.5 credits)
   MATB24H3 Linear Algebra II
   MATB41H3 Techniques of the Calculus of Several Variables I
   MATB42H3 Techniques of the Calculus of Several Variables II
   MATB43H3 Introduction to Analysis
   MATB44H3 Differential Equations I
   STAB52H3 Introduction to Probability (**) 
   STAB57H3 Introduction to Statistics (**) 
   (**) This course may be taken after second year, except for the Statistics stream.

4. C-Level Courses (1 credit)
   MATC01H3 Groups and Symmetry
   MATC34H3 Complex Variables

A. Comprehensive Stream
This stream requires a total of 27 courses (13.5 credits)
In addition to the core requirements 1-4 common to all streams, 13 other distinct courses must be chosen satisfying all of the following requirements:

5. Elementary courses in closely related disciplines (1.5 credits) : (***)
   CSCA48H3 Introduction to Computer Science
   PHYA10H3 Introduction to Physics IA
   PHYA21H3 Introduction to Physics IIA
(***) It is recommended that these be taken in first year.

6. **Additional courses in analysis and algebra** (1.5 credits):
   - MATC37H3 Introduction to Real Analysis
   - MATC46H3 Differential Equations II
   - MATD01H3 Fields and Groups

7. **Courses in key areas of mathematics** (1.5 credits):
   **Three of:**
   - MATC15H3 Introduction to Number Theory
   - MATC27H3 Introduction to Topology
   - MATD02H3 Classical Plane Geometries and their Transformations
   - MATD34H3 Complex Variables II

8. **Mathematics of computation** (0.5 credit):
   **One of:**
   - MATC09H3 Introduction to Mathematical Logic
   - MATC32H3 Graph Theory and Algorithms for its Applications
   - MATC44H3 Introduction to Combinatorics
   - CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
   - CSCC63H3 Computability and Computational Complexity

9. **Electives** (1.5 credits):
   **Three of:**
   - C- or D-level MAT courses, excluding MATC82H3 and MATC90H3

**B. Statistics Stream**
This stream requires a total of 25 courses (12.5 credits)
In addition to the core requirements 1-4 common to all streams, 11 other distinct courses must be chosen, satisfying all of the following requirements (in choosing courses to satisfy requirements 7-9, students must select at least one D-level course):

5. **Algebra and Analysis** (1.5 credits):
   - MATB61H3 Linear Programming and Optimization
   - MATC46H3 Differential Equations II
   - MATD01H3 Fields and Groups

6. **Regression Analysis** (0.5 credit):
   - STAC67H3 Regression Analysis

7. **Discrete mathematics and geometry** (0.5 credit):
   **One of:**
   - MATC32H3 Graph Theory and Algorithms for its Applications
   - MATC44H3 Introduction to Combinatorics
   - MATD02H3 Classical Plane Geometries and their Transformations

8. **Upper-level MAT electives** (1 credit):
   **Two of:**
   - Any C- or D-level MAT courses (*)
   (*) For students wishing to pursue graduate studies in Mathematics or Statistics it is recommended that MATC37H3 be chosen as one of these two courses.

9. **Upper-level STA electives** (2 credits):
   **Four of:**
   - ACTB47H3 Introductory Life Contingencies
   - Any C- or D-level STA courses, excluding STAD29H3

**C. Teaching Stream**
This stream requires a total of 25 courses (12.5 credits).
In addition to the core requirements 1-4 common to all streams, 11 other distinct courses must be chosen satisfying all of the following requirements:
5. **Algebra, analysis, and geometry** (2 credits):
   MATC15H3 Introduction to Number Theory
   MATC82H3 Mathematics for Teachers
   MATD01H3 Fields and Groups
   MATD02H3 Classical Plane Geometries and their Transformations

6. **Discrete mathematics** (0.5 credit):
   **One of:**
   - MATC32H3 Graph Theory and Algorithms for its Applications
   - MATC44H3 Introduction to Combinatorics

7. **MAT electives** (1.5 credits):
   **Three of:**
   - C- or D-level MAT courses

8. **MAT/STA/CSC electives** (1.5 credits):
   **Three of:**
   - C- or D-level MAT, STA, or CSC courses, excluding STAD29H3

**D. Design-Your-Own-Stream**
This stream requires a total of 25 courses (12.5 credits).
In addition to the core requirements 1–4 common to all streams, 11 other distinct courses must be chosen, satisfying the following requirement:

5. **Electives** (5.5 credits):
   11 courses approved by the program supervisor. The core courses together with the approved electives must satisfy the degree requirement that they include at least 12 courses (6 credits) at the C-or D-level, of which at least two (one credit) are at the D-level.

**MAJOR PROGRAM IN MATHEMATICS (SCIENCE)**
*Supervisor of Studies*: N. Cheredeko (416-287-7226)  *Email*: n.cheredeko@utoronto.ca

**Program Objectives**
This program provides a solid foundation in basic areas of mathematics, especially those with applications in other disciplines. This program is intended to be combined with other programs, typically a major program in another discipline.

**Program Requirements**
This stream requires a total of 16 distinct courses (8 credits), chosen so as to satisfy all of the following requirements:

1. Foundational courses (5 credits)
   MATA23H3 Linear Algebra I
   **One of:**
   - MATA30H3 Calculus I for Biological and Physical Sciences
   - MATA31H3 Calculus I for Mathematical Sciences
   **One of:**
   - MATA36H3 Calculus II for Physical Sciences
   - MATA37H3 Calculus II for Mathematical Sciences (*)
   - CSCA08H3 Introduction to Computer Programming
   - MATB24H3 Linear Algebra II
   - MATB41H3 Techniques of the Calculus of Several Variables I
   - MATB42H3 Techniques of the Calculus of Several Variables II
   - MATB44H3 Differential Equations I
   - STAB52H3 Introduction to Probability
   **One of:**
   - MATC01H3 Groups and Symmetry
   - MATC15H3 Introduction to Number Theory
   (*) MATA31H3 is required for MATA37H3

2. Further analysis courses (1 credit)
   **Two of:**
   - MATB43H3 Introduction to Analysis
   - MATC27H3 Introduction to Topology
   - MATC34H3 Complex Variables
   - MATC35H3 Chaos, Fractals, and Dynamics
   - MATC37H3 Introduction to Real Analysis
MATC46H3 Differential Equations II
MATD34H3 Complex Variables II

3. Further algebra, geometry, and discrete mathematics courses (1 credit)
   Two of:
   MATC01H3 Groups and Symmetry
   MATC09H3 Introduction to Mathematical Logic
   MATC15H3 Introduction to Number Theory
   MATC32H3 Graph Theory and Algorithms for its Applications
   MATC44H3 Introduction to Combinatorics
   MATC63H3 Differential Geometry
   MATD01H3 Fields and Groups
   MATD02H3 Classical Plane Geometries and their Transformations

4. Electives (1 credit)
   Two of:
   MATB61H3 Linear Programming and Optimization
   STAB57H3 Introduction to Statistics
   Any C-or D-level MAT, STA, or CSC course, excluding STAD29H3

   Recommended Writing Course: Students are urged to take a course from the following list of courses by the end of their second year.

   SPECIALIST PROGRAM IN QUANTITATIVE ANALYSIS (SCIENCE)
   See the Statistics section of this Calendar for program requirements.

   MATA02H3 The Magic of Numbers
   A selection from the following topics: the number sense (neuroscience of numbers); numerical notation in different cultures; what is a number; Zeno’s paradox; divisibility, the fascination of prime numbers; prime numbers and encryption; perspective in art and geometry; Kepler and platonic solids; golden mean, Fibbonacci sequence; elementary probability.
   Breadth Requirement: Quantitative Reasoning

   MATA23H3 Linear Algebra I
   Systems of linear equations, matrices, Gaussian elimination; basis, dimension; dot products; geometry to \( \mathbb{R}^3 \); linear transformations; determinants, Cramer's rule; eigenvalues and eigenvectors, diagonalization.
   Prerequisite: Grade 12 Calculus and Vectors or [Grade 12 Advanced Functions and Introductory Calculus & Geometry and Discrete Mathematics]
   Exclusion: MAT223H
   Breadth Requirement: Quantitative Reasoning

   MATA30H3 Calculus I for Biological and Physical Sciences
   Prerequisite: Grade 12 Calculus and Vectors
   Breadth Requirement: Quantitative Reasoning

   MATA31H3 Calculus I for Mathematical Sciences
   A theoretical course in calculus emphasizing proofs and techniques, as well as the intuition behind them. Axioms and basic properties of real numbers. Functions, including transcendental. Limits and continuity. Least upper bounds, extreme and intermediate value theorems. Derivatives and applications. Integrals and the fundamental theorem of calculus.
   Prerequisite: Grade 12 Calculus and Vectors
   Breadth Requirement: Quantitative Reasoning

   MATA32H3 Calculus for Management I
   This is a calculus course with most examples and applications of an economic nature. Topics to be covered: linear programming (geometric); introduction to financial mathematics; continuous functions including exponential and logarithmic functions with applications to finance; differential calculus of one variable; marginal analysis; optimization of single variable functions; techniques of integration.
   Prerequisite: Grade 12 Calculus and Vectors
   Exclusion: (MATA20H3), (MATA27H3), MATA30H3, MAT123H, MAT125H, MAT126H, MAT133Y, MAT135Y, MAT137Y, MAT157Y, JMB170Y
   Breadth Requirement: Quantitative Reasoning
MATA33H3 Calculus for Management II
This course will introduce the students to multivariable calculus and linear algebra. Topics will include: matrix algebra; multi-variable functions; contour maps; partial and total differentiation; optimization of multi-variable functions; optimization of constrained multi-variable functions; Lagrange multipliers.
Prerequisite: MATA32H3
Exclusion: (MATA21H3), (MATA27H3), MATA35H3,
MATA36H3, MATA37H3, MAT124H, MAT126H,
MAT133Y, MAT134Y, MAT135Y, MAT136Y,
MAT137Y, MAT157Y, JMB170Y
Breadth Requirement: Quantitative Reasoning

MATA35H3 Calculus II for Biological Sciences
A calculus course emphasizing examples and applications in the biological and environmental sciences. Discrete probability; basic statistics: hypothesis testing, distribution analysis. Basic calculus: extrema, growth rates, diffusion rates; differential equations; population dynamics; vectors and matrices in 2 and 3 dimensions; genetics applications.
Note: This course will not satisfy the Mathematics requirements for any Program in Computer and Mathematical Sciences, nor will it normally serve as a prerequisite for further courses in Mathematics. Students who are not sure which Calculus II course they should choose are encouraged to consult with the supervisor(s) of Programs in their area(s) of interest.
Prerequisite: MATA30H3 or MATA31H3
Exclusion: (MATA21H3), MATA33H3, MATA36H3,
MATA37H3, MAT123H, MAT124H, MAT125H,
MAT126H, MAT133Y, MAT135Y, MAT137Y,
MAT157Y, JMB170Y, (MATA27H3)
Breadth Requirement: Quantitative Reasoning

MATA36H3 Calculus II for Physical Sciences
This course is intended to prepare students for the physical sciences. Topics to be covered include: Newton's method, approximation of functions by Taylor polynomials, numerical methods of integration, complex numbers, sequences, series, Taylor series, differential equations.
Prerequisite: MATA30H3 or MATA31H3
Exclusion: (MATA21H3), MATA33H3, MATA35H3,
MATA36H3, MATA37H3, MAT123H, MAT124H, MAT125H,
MAT126H, MAT133Y, MAT135Y, MAT137Y,
MAT157Y, JMB170Y
Breadth Requirement: Quantitative Reasoning

MATA37H3 Calculus II for Mathematical Sciences
A continuation of MATA31H3, emphasizing proofs and techniques, as well as the intuition behind them. Transcendental functions revisited. Techniques and applications of integration. Taylor polynomials and remainder term. Sequences and series. Uniform convergence and power series.
Prerequisite: MATA31H3
Exclusion: (MATA21H3), MATA33H3, MATA35H3,
MATA36H3, MAT123H, MAT124H, MAT125H,
MAT126H, MAT133Y, MAT135Y, MAT137Y,
MAT157Y, JMB170Y
Breadth Requirement: Quantitative Reasoning

MATB24H3 Linear Algebra II
Fields, vector spaces over a field, linear transformations; inner product spaces, coordinatization and change of basis; diagonalizability, orthogonal transformations, invariant subspaces, Cayley-Hamilton theorem; hermitian inner product, normal, self-adjoint and unitary operations. Some applications such as the method of least squares and introduction to coding theory.
Prerequisite: MATA23H3 or MAT223H
Exclusion: MAT224H
Breadth Requirement: Quantitative Reasoning

MATB41H3 Techniques of the Calculus of Several Variables I
Partial derivatives, gradient, tangent plane, Jacobian matrix and chain rule, Taylor series; extremal problems, extremal problems with constraints and Lagrange multipliers, multiple integrals, spherical and cylindrical coordinates, law of transformation of variables.
Prerequisite: [MATA23H3 or MAT223H] & [MATA36H3 or MATA37H3 or MAT137Y or MAT157Y]
Exclusion: MAT232H, MAT235Y, MAT237Y, MAT257Y
Breadth Requirement: Quantitative Reasoning

MATB42H3 Techniques of the Calculus of Several Variables II
Fourier series. Vector fields in $\mathbb{R}^n$, Divergence and curl, curves, parametric representation of curves, path and line integrals, surfaces, parametric representations of surfaces, surface integrals. Green's, Gauss', and Stokes' theorems will also be covered. An introduction to differential forms, total derivative.
Prerequisite: MATB41H3
Exclusion: MAT235Y, MAT237Y, MAT257Y, MAT368H
Breadth Requirement: Quantitative Reasoning

MATB43H3 Introduction to Analysis
Generalities of sets and functions, countability. Topology and analysis on the real line: sequences, compactness, completeness, continuity, uniform continuity. Topics from topology and analysis in metric and Euclidean spaces.
Sequences and series of functions, uniform convergence.
Prerequisite: [MATA37H3 or MAT137Y] & MATB24H3
Corequisite: MATB42H3
Exclusion: MAT246Y
Breadth Requirement: Quantitative Reasoning

MATB44H3 Differential Equations I
Ordinary differential equations of the first and second order, existence and uniqueness; solutions by series and integrals; linear systems of first order; non-linear equations; difference equations.
Prerequisite: [MATA36H3 or MATA37H3] & MATA23H
Corequisite: MATB41H3
Exclusion: MAT244H, MAT267H
Breadth Requirement: Quantitative Reasoning

MATB61H3 Linear Programming and Optimization
Linear programming, simplex algorithm, duality theory, interior point method; quadratic and convex optimization, stochastic programming; applications to portfolio optimization and operations research.
Prerequisite: MATA23H3
Corequisite: MATB42H3
Exclusion: APM236H
Breadth Requirement: Quantitative Reasoning
MATC01H3 Groups and Symmetry

MATC09H3 Introduction to Mathematical Logic

MATC15H3 Introduction to Number Theory
  Elementary topics in number theory; arithmetic functions; polynomials over the residue classes modulo m, characters on the residue classes modulo m; quadratic reciprocity law, representation of numbers as sums of squares. Prerequisite: [MATA36H3 or MATA37H3] & MATB24H3 Exclusion: MAT315H Breadth Requirement: Quantitative Reasoning

MATC16H3 Coding Theory and Cryptography
  The main problems of coding theory and cryptography are defined. Classic linear and non-linear codes. Error correcting and decoding properties. Cryptanalysis of classical ciphers from substitution to DES and various public key systems [e.g. RSA] and discrete logarithm based systems. Needed mathematical results from number theory, finite fields, and complexity theory are stated. Prerequisite: MATB24H3 & STAB52H3 Corequisite: MATC15H3 recommended Breadth Requirement: Quantitative Reasoning

MATC27H3 Introduction to Topology

MATC32H3 Graph Theory and Algorithms for its Applications
  Graphs, subgraphs, isomorphism, trees, connectivity, Euler and Hamiltonian properties, matchings, vertex and edge colourings, planarity, network flows and strongly regular graphs; applications to such problems as timetabling, personnel assignment, tank form scheduling, traveling salesmen, tournament scheduling, experimental design and finite geometries. Prerequisite: [MATB24H3 or CSCB36H3] & at least one other B-level course in Mathematics or Computer Science Breadth Requirement: Quantitative Reasoning

MATC34H3 Complex Variables
  Theory of functions of one complex variable, analytic and meromorphic functions. Cauchy's theorem, residue calculus, conformal mappings, introduction to analytic continuation and harmonic functions. Prerequisite: MATB42H3 Exclusion: MAT334H Breadth Requirement: Quantitative Reasoning

MATC35H3 Chaos, Fractals and Dynamics
  Topics covered include: metric spaces, dynamics on the real line, fixed points, periodic points, attractors, repellers, Sharkovski's theorem parametrized families of functions and bifurcations, period doubling, dynamics of the logistic map, symbolic dynamics, chaos, topological equivalence of the logistic map and the shift map, Newton's method; dynamics on the complex line, iterations of rational functions, Julia sets, Mandelbrot set. Prerequisite: MATB43H3 Exclusion: MAT335H Breadth Requirement: Quantitative Reasoning

MATC37H3 Introduction to Real Analysis

MATC44H3 Introduction to Combinatorics
  Basic counting principles, generating functions, permutations with restrictions. Fundamentals of graph theory with algorithms; applications (including network flows). Combinatorial structures including block designs and finite geometries. Prerequisite: MATB24H3 Exclusion: MAT344H Breadth Requirement: Quantitative Reasoning

MATC46H3 Differential Equations II

MATC58H3 An Introduction to Mathematical Biology
  Mathematical analysis of problems associated with biology, including models of population growth, cell biology, molecular evolution, infectious diseases, and other biological and medical disciplines. A review of mathematical topics: linear algebra (matrices, eigenvalues and eigenvectors), properties of ordinary differential equations and difference equations. Prerequisite: MATB44H3 Breadth Requirement: Quantitative Reasoning
MATC63H3 Differential Geometry
Curves and surfaces in Euclidean 3-space. Serret-Frenet frames and the associated equations, the first and second fundamental forms and their integrability conditions, intrinsic geometry and parallelism, the Gauss-Bonnet theorem.
Prerequisite: MATB43H3
Exclusion: MAT363H
Breadth Requirement: Quantitative Reasoning

MATC82H3 Mathematics for Teachers
The course discusses the Mathematics curriculum (K-12) from the following aspects: the strands of the curriculum and their place in the world of Mathematics, the nature of proofs, the applications of Mathematics, and its connection to other subjects.
Prerequisite: [MATA23H3 & MATA37H3] or [MATA23H3 & MATA36H3 & [(CSCA65H3) or MATB24H3]
Exclusion: MAT382H
Breadth Requirement: Quantitative Reasoning

MATC90H3 Beginnings of Mathematics
Mathematical problems which have arisen repeatedly in different cultures, e.g. solution of quadratic equations, Pythagorean theorem, transmission of mathematics between civilizations; high points of ancient mathematics, e.g. study of incommensurability in Greece, Pell's equation in India.
Prerequisite: One Grade 12 Mathematics course & 5.0 full university courses
Exclusion: MAT390H
Breadth Requirement: Quantitative Reasoning

MATD01H3 Fields and Groups
Abstract group theory: Sylow theorems, groups of small order, simple groups, classification of finite abelian groups.
Fields and Galois theory: polynomials over a field, field extensions, constructibility; Galois groups of polynomials, in particular cubics; insolubility of quintics by radicals.
Prerequisite: MATC01H3
Exclusion: (MAT302H), MAT347Y, (MATC02H3)
Recommended Preparation: MATC34H3
Breadth Requirement: Quantitative Reasoning

MATD02H3 Classical Plane Geometries and their Transformations
An introduction to geometry with a selection of topics from the following: symmetry and symmetry groups, finite geometries and applications, non-Euclidean geometry.
Prerequisite: MATA23H3
Corequisite: MATC01H3
Exclusion: MAT402H, (MAT365H), (MAT25H3)
Breadth Requirement: Quantitative Reasoning

Media Studies

Faculty List
R. Bai, B.A., M.A. (Beijing Foreign Studies), Ph.D. (Illinois), Assistant Professor
K. McCrindle, M.A., Ph.D. (Toronto), Senior Lecturer
M. Petit, M.A., Ph.D. (Colorado), Lecturer

MAJOR PROGRAM IN MEDIA STUDIES (ARTS)
Program Director: M. Petit Email: mepetit@utsc.utoronto.ca
Undergraduate Advisor: Email: mds-undergrad-advisor@utsc.utoronto.ca
The Major Program in Media Studies is under review and new enrolment has been suspended indefinitely. Students who first enrolled prior to the 2010 Summer Session should refer to the 2009/2010 UTSC Calendar. Students interested in Media Studies should consider applying to the Joint Program in New Media or the Joint Program in Journalism, or combining a Media Studies Minor with a Studio Major or Minor with a focus on digital media. The Media Studies Program Overview is available at:
www.utsc.utoronto.ca/~humdiv/prg_ms.html
MINOR PROGRAM IN MEDIA STUDIES (ARTS)

Undergraduate Advisor: Email: mds-undergrad-advisor@utsc.utoronto.ca

Program Requirements

Students must complete 4.0 full credits from the courses below as follows:

1.0 credit from the following:
- HUMA01H3 Exploring Key Questions in the Humanities
- MDSA01H3 Introduction to Media Studies

0.5 credit from the following:
- MDSA02H3 History of Media and Technology
- MDSB05H3 Media and Globalization

1.0 credit from the following:
- MDSB02H3 Language and the Media
- MDSB03H3 Advertising and Consumer Culture
- MDSB06H3 Asian Visual Culture and Media
- MDSB25H3 Political Economy of Media
- MDSB61H3 Critical Approaches to Digital Media
- MDSB62H3 Understanding Visual Culture

1.0 credit from the following:
- MDSC01H3 Theories and Methods in Media Studies
- MDSC02H3 Topics in Media, Identities and Politics
- MDSC04H3 Chinese Media and Politics
- MDSC41H3 Media and Popular Culture in East and Southeast Asia
- MDSC63H3 Legal and Ethical Issues in Media Studies
- MDSC64H3 Old Media, New: Film and New Technology
- MDSD01H3 Senior Seminar: Topics in Media and Arts
- MDSD02H3 Senior Seminar: Topics in Media and Society

0.5 credit from the following:
- IDSC08H3 Media and Development
- VPAA06H3 Visual and Performing Arts Management in the Digital Age
- VPAB05H3 Introduction to Contemporary Cultural Theory
- WSTB13H3 Women and the Media
- VPHB68H3 Art and the Everyday: Mass Culture and the Visual Arts
- ENGB70H3 Introduction to Cinema
- VPMB97H3 Film Music
- ECMC20H3 Economics of the Media
- SOCC44H3 Media and Society
- GASC45H3 Film and Popular Cultures in East Asia
- ENGC56H3 Literature and Media: From Page to Screen
- VPMC97H3 Music, Technologies, Media

MDSA01H3 Introduction to Media Studies

Introduces students to key terms and concepts in media studies and provides an overview of theoretical and critical understandings of media. Students develop their understanding of the political, economic, social and cultural contexts in which mediated images and texts are produced, distributed, and consumed.

Exclusion: (NMEA20H3)

Breadth Requirement: History, Philosophy & Cultural Studies

MDSA02H3 History of Media and Technology

This course surveys the history of media and communication technologies, from the development of writing through to the printing press, newspaper, telegraph, radio, film, television, and internet. Students examine the complex interplay among changing media technologies and concomitant cultural, political and social changes, from the rise of a public sphere to the development of highly-mediated forms of self identity.

Breadth Requirement: History, Philosophy & Cultural Studies

MDSB01H3 Human, Inhuman, and Non-Human

This course examines how the definition of the human is related to science and technology. The topics include the development of media and communication technology, and the intersection of popular culture with new social media and gaming.

Same as IEEB01H3

Prerequisite: At least 4.0 credits

Exclusion: IEEB01H3

Recommended Preparation: HUMA01H3

Breadth Requirement: History, Philosophy & Cultural Studies

*Pending Governance Approval, please see the Online Calendar for the final copy.
MDSB02H3 Language and Media
A study of the relationship between language and media. The course examines language as a social phenomenon, in particular the ways in which media represent language-related issues and how media's use of language affects people's notions of what acceptable language use is and ought to be. Prerequisite: [[MDSA01H3 or (NMEA20H3)] & MDSA02H3] or [[(MDSA21H3) or JOUA01H3] & [(MDSA22H3) or JOUA02H3]] Breadth Requirement: Arts, Literature & Language

MDSB03H3 Advertising and Consumer Culture
This course introduces students to the study of advertising as social communication and provides a historical perspective on advertising's role in the emergence and perpetuation of 'consumer culture'. The course examines the strategies employed to promote the circulation of goods as well as the impact of advertising on the creation of new habits and expectations in everyday life. Prerequisite: MDSA01H3 or (NMEA20H3) Breadth Requirement: History, Philosophy & Cultural Studies

MDSB05H3 Media and Globalization
This course introduces students to the variety of ways cultural and social theorists have addressed notions of "globalization" and the media. The course focuses on media systems and practices in the non-western world, including Asia, Latin America, and the Middle East. Same as GASB05H3 Exclusion: GASB05H3 Breadth Requirement: History, Philosophy & Cultural Studies

MDSB06H3 Asian Visual Culture and Media
This course introduces students to contemporary visual culture and media in Asia. Combining theories of visual culture with a focus on Asia, it surveys a diverse array of cultural forms such as advertisements, television series, films, and social media, and examines the role that images play in contemporary Asian societies. Same as GASB06H3 Prerequisite: MDSA01H3 Exclusion: GASB06H3 Breadth Requirement: History, Philosophy & Cultural Studies

MDSB25H3 Political Economy of Media
This course applies concepts and principles developed by political economy theorists to the economic structure and policies that influence communication and media systems. These concepts are used to analyze the major media industries, including print, radio, television, film, video, recorded music, video games, telecommunications, online communication and advertising. Prerequisite: MDSA01H3 or (NMEA20H3) Breadth Requirement: Arts, Literature & Language

MDSB61H3 Critical Approaches to Digital Media
This course introduces students to the key terms and concepts in digital media studies as well as approaches to digital media criticism. Students examine the myriad ways that digital media contribute to an ongoing reformulation of the dynamics of contemporary society, including changing concepts of community, communication, identity, privacy, property, and the political. Prerequisite: MDSA01H3 Breadth Requirement: History, Philosophy & Cultural Studies

MDSB62H3 Understanding Visual Culture
Visual Culture studies the construction of the visual in art, media, technology and everyday life. Students learn the tools of visual analysis; investigate how visual depictions such as YouTube and advertising structures convey ideologies; and study the institutional, economic, political, social and market factors in the making of contemporary visual culture. Prerequisite: MDSA01H3 or (NMEA20H3) Exclusion: (NMEB20H3) Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

MDSC01H3 Theories and Methods in Media Studies
This is an advanced seminar on theories and methodologies applied to the study of media. Topics vary. Prerequisite: Any 5.0 credits including [MDSA01H3 or (NMEA20H3)] & MDSA02H3 Enrolment Limits: 30 Breadth Requirement: History, Philosophy & Cultural Studies

MDSC02H3 Topics in Media, Identities and Politics
This course explores the centrality of mass media such as television, film, the Web, and mobile media in the formation of multiple identities, and the role of media as focal points for various cultural and political contestations. Prerequisite: 5.0 credits, including [MDSA01H3 or (NMEA20H3)] Enrolment Limits: 35 Breadth Requirement: Social & Behavioural Sciences

MDSC40H3 Chinese Media and Politics
This course examines the complex and dynamic interplay of media and politics in contemporary China, and the role of the government in this process. Same as GASC40H3 Prerequisite: Any 4 credits including HUMA01H3 Exclusion: GASC40H3 Enrolment Limit: 75 Breadth Requirement: History, Philosophy & Cultural Studies

MDSC41H3 Media and Popular Culture in East and Southeast Asia
This course introduces students to media industries and commercial popular cultural forms in East and Southeast Asia. Topics include reality TV, TV dramas, anime and manga, as well as issues such as regional cultural flows, global impact of Asian popular culture, and the localization of global media in Asia. Same as GASC41H3 and IEEC21H3
Prerequisite: Any 4 credits including HUMA01H3
Exclusion: GASC41H3, IEEC21H3
Enrolment Limit: 75
Breadth Requirement: History, Philosophy & Cultural Studies

MDSC63H3 Legal and Ethical Issues in Media Studies
Introduces students to legal and ethical issues in media. Students learn legal principles and ethical theory and apply them to media industries and practices. Topics include issues of access, privacy, intellectual property and copyright, libel and slander, violence, censorship, and media democratization.
Prerequisite: 5.0 credits, including [MDSA01H3 or (NMEA20H3)]
Exclusion: JOUA06H3
Enrolment Limits: 35
Breadth Requirement: History, Philosophy & Cultural

MDSC64H3 Old Media, New: Film and New Technology
From the first depiction of a cyborg in Metropolis (1927) to the Web-based surveillance devices of Minority Report (2002), film is central to organizing cultural discourse around new media and technology. This course examines how the popularization of both real and imagined technologies in various films contributes to cultural attitudes that attend the introduction and social diffusion of new technologies.
Prerequisite: Any 5.0 credits including MDSA02H3
Enrolment Limits: 35
Breadth Requirement: Arts, Literature & Language

Neuroscience
Faculty List
J.W. Gurd, B.A. (Mount Allison), Ph.D. (McGill), Professor Emeritus
N.W. Milgram, B.A. (UCLA), M.A., Ph.D. (McGill), Professor Emeritus
R. Boonstra, B.Sc. (Calgary), Ph.D. (British Columbia), Professor
I.R. Brown, B.Sc. (Carleton), Ph.D. (Texas), Professor
G.O. Ivy, B.A. (Drew), Ph.D. (California), Professor
T.L. Petit, B.Sc., M.A. (Louisiana), Ph.D. (Florida), Professor
S. Erb, B.Sc. (Wilfrid Laurier), M.A., Ph.D. (Concordia), Associate Professor
D.W. Haley, B.A. (Annapolis), M.A. (San Francisco), Ph.D. (Albuquerque), Associate Professor
A.C. Mason, B.Sc. (Guelph), M.Sc., Ph.D. (Toronto), Associate Professor
M. Niemeier, M.A. (Hamburg), Ph.D. (Tubingen), Associate Professor
S.G. Reid, B.Sc., Ph.D. (Ottawa), Associate Professor
K.K. Zakzanis, B.A., M.A., Ph.D., C.Psych. (York), Associate Professor
M.M. Aarts, B.Sc., M.Sc., Ph.D. (McGill), Assistant Professor
R. Ito, B.A. (Oxford), Ph.D. (Cambridge), Assistant Professor
J.E. Nash, B.Sc. (Aberdeen), M.Sc., Ph.D. (Manchester), Assistant Professor
D. Nussbaum, B.A., M.A. (York), Ph.D. (Waterloo), Assistant Professor
A.C. Ruocco, B.A. (York), M.Sc., Ph.D., C. Psych (Drexel), Assistant Professor
J.C. LeBoutillier, B.Sc., M.A., Ph.D. (Toronto), Senior Lecturer

Associate Chair & Program Supervisor: TBA Email: neuroscience-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Neuroscience encompasses aspects of a variety of disciplines that have the common goal of understanding how the nervous system works. Techniques from constituent disciplines like anatomy, biochemistry, molecular biology, pharmacology, physiology, psychology and zoology are used to unravel some of the mysteries of the brain and its mechanisms of action. Investigators in Neuroscience have also made fundamental contributions to clinical aspects of neurodysfunction and behaviour.
The Major Program is intended for students who wish to combine their studies of Neuroscience with other areas of interest. The Specialist Program is designed for students who have a particular interest in the Neurosciences and wish to focus their studies in this area. The Specialist (Co-operative) Program provides the student with a broad background in neuroscience, with intensive lab experience and practical experience in real job settings. In very few instances, courses from the other campuses may be used to satisfy Program requirements. However such substitutions must be pre-approved by the Program Supervisor, in writing on an official form obtained from the Registrar's Office.

**Admission to Neuroscience Programs**

The Specialist and Major programs in Neuroscience have enrolment limits. Every year students will be admitted to the Specialist Programs in Neuroscience including Co-operative studies and the major program in NRO. Entry into these programs can be gained as follows:

1. **Direct entry**: Students may be admitted directly from high school, on the basis of academic performance and must have completed math and chemistry (biology is recommended). Physics is recommended for students interested in applying to the specialist program. Students will be required to have a cumulative GPA of 2.30 or higher at the end of 1st year (i.e. at the end of the session in which they complete their 4th credit) to remain in the Specialist program. Students whose cumulative GPA at the end of 1st year is between 2.00 and 2.49 may transfer to the major program.

2. **Admission after first year**: Students may apply to the program after completing a minimum of 4.0 credits including 1 credit in biology, chemistry and psychology. Admission will be based on cumulative GPA with 2.8 or higher guaranteeing admission to the Specialist program and 2.0 to the Major program. Students with lower GPAs will be considered to the extent that laboratory spaces are available for both programs. The minimum GPA used to admit these students will be determined in May (after the Winter session) and August (after the Summer session). Application for admission will be made to the Registrar through ROSI, in April/May and July/August.

**Neuroscience courses**

Priority access to Neuroscience courses will be given to Major and Specialists in Neuroscience programs and other programs requiring these courses. During the first two weeks of Fall/Winter registration, the courses will be restricted to these students. Provided space is available, the courses will be opened to other students in the third week.

**First-Year Students in Neuroscience**

BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, PSYA01H3 and PSYA02H3 are recommended in the first year if you are intending to pursue a Specialist or Major Program in Neuroscience. For Specialists, MATA30H3 and [PHYA10H3 or PHYA11H3] are recommended in the first two years.

**Service Learning and Outreach (Previously known as Science Engagement)**

For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

**SPECIALIST PROGRAM IN NEUROSCIENCE (SCIENCE)**

*Associate Chair & Program Supervisor: TBA  Email: neuroscience-program-supervisor@utsc.utoronto.ca*

*Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca*

**Program Requirements**

The Program requires completion of 14.0 credits:

1. The following 4.0 credits:
   
   BIOA01H3 Life on Earth: Unifying Principles
   BIOA02H3 Life on Earth: Form, Function and Interactions
   CHMA10H3 Introductory Chemistry I: Structure and Bonding
   CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
   [MATA30H3 Calculus I for Biological and Physical Sciences *or* (MATA20H3) Calculus A]
   [PHYA10H3 Physics IA *or* PHYA11H3 Physics IB]
   PSYA01H3 Introductory Psychology: Part I
   PSYA02H3 Introductory Psychology: Part II

2. The following 3.5 credits:

   BIOB10H3 Cell Biology
   BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
   CHMB41H3 Organic Chemistry I
   CHMB42H3 Organic Chemistry II
   NROB60H3 Neuroanatomy Laboratory
The Neuroscience Co-operative program is designed to provide the student with a broad education in neuroscience, including neuroanatomy, neurophysiology, behaviour, psychology, biochemistry, cell and molecular biology and data analysis through lectures, lecture/lab and intensive laboratory courses. The program combines academic studies in the field of neuroscience with practical work experience in settings in which scientific knowledge from various subfields in the discipline is applied. Students may apply for work term employment in settings such as research and development departments in industry, educational institutions, health care institutions and government agencies.

The work experience provided by the program enables students to explore career opportunities that may be pursued following the Bachelor's degree. Work settings may also provide students with the opportunity to observe neuroscientists interacting with other professionals, hence providing a broader and more informed basis for the selection of a post-graduate program appropriate to the student's talents and interests. Some work settings will provide the opportunity for participation in applied research.

For information on admissions, fees, work terms and standing in the program, please see Co-operative Programs section of this Calendar.

**Program Admission**

Enrolment in the program is limited.

*Prospective Applicants:* For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.

*Current U of T Scarborough students:* Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, PSYA01H3 & PSYA02H3 plus a cumulative GPA of at least 2.75.

**Program Requirements**

*Work Terms*

The program requires eight four-month terms of study and two four-month work terms over a four year period. To be eligible for their first work term, students must have completed at least 10.0 credits including: BIOB10H3, BIOB11H3, BIOB12H3, CHMB41H3, CHMB42H3, NROB60H3, NROC61H3 or NROC64H3. Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term. To be eligible for their second work term, students must have completed at least 12.5 full credits and have received satisfactory evaluation for their performance and for their report on their first work term.
Course Requirements
The program requires the completion of 15.0 credits including the 14.0 credits as specified in the Specialist Program in Neuroscience, plus the following:
1. BIOB12H3 Cell and Molecular Biology Laboratory
2. BIOC23H3 Practical Approaches to Biochemistry
3. The Arts & Science Co-op Work Term Preparation course

MAJOR PROGRAM IN NEUROSCIENCE (SCIENCE)
Associate Chair & Program Supervisor: TBA Email: neuroscience-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements
The Program requires completion of 8.0 credits. Students who wish to combine the Major Program in Neuroscience with the Major in Biology or the Major in Mental Health Studies or the Major in Psychology are advised that they must present 12.0 distinct credits to receive certification of the completion of both programs. Consultation with the respective Program Supervisors in the selection of credits is recommended. The following indicates the required credits for the Major Program in Neuroscience:

1. The following 3.0 credits:
   BIOA01H3 Life on Earth: Unifying Principles
   BIOA02H3 Life on Earth: Form, Function and Interactions
   CHMA10H3 Introductory Chemistry I: Structure and Bonding
   CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
   PSYA01H3 Introductory Psychology: Part I
   PSYA02H3 Introductory Psychology: Part II

2. The following 2.5 credits:
   BIOB10H3 Cell Biology
   BIOB11H3 Molecular Aspects of Cellular and Genetic Processes
   NROB60H3 Neuroanatomy Laboratory
   PSYB65H3 Human Brain and Behaviour
   [STAB22H3 Statistics I or PSYB07H3 Data Analysis in Psychology]

3. The following 1.5 credits:
   BIOC32H3 Human Physiology I
   NROC61H3 Learning and Motivation
   NROC64H3 Sensory and Motor Systems

4. 1.0 credit from the following:
   BIOC14H3 Genes, Environment and Behaviour
   BIOD19H3 Epigenetics in Health and Disease
   BIOC33H3 Human Physiology II: Lecture & Laboratory
   BIOD27H3 Molecular Endocrinology
   BIOD45H3 Animal Communication
   BIOD65H3 Pathologies of the Nervous System
   NROC34H3 Neuroethology
   NROC63H3 Neuroscience Laboratory
   NROC69H3 Synaptic Organization & Physiology of the Brain
   NROC90H3 Supervised Study in Neuroscience
   NROD60H3 Current Topics in Neuroscience
   NROD63H3 Advanced Neuroscience Laboratory
   NROD66H3 Drug Addiction
   NROD67H3 Psychobiology of Aging
   PSYC62H3 Drugs and the Brain
   PSYD17H3 Social Neuroscience
   PSYD33H3 Current Topics in Abnormal Psychology
   PSYD66H3 Current Topics in Human Brain & Behaviour

NROB60H3 Neuroanatomy Laboratory
This course will focus on lab neuroanatomy at both the human and animal level. This will also include examination of the structure and function of neurons and glia, neurochemistry, and neuromechanisms of communication at the cellular and molecular level.

Prerequisite: BIOA01H3 & BIOA02H3 & PSYA01H3 & PSYA02H3. Note: CHMA10H3 & CHMA11H3 are strongly recommended for students with no Chemistry background.
Exclusion: CSC332H, PSY290H, PSY391H, ZOO332H
Breadth Requirement: Natural Sciences
NROC34H3 Neuroethology
Neural basis of natural behaviour; integrative function of the nervous system; motor and sensory systems; mechanisms of decision-making, initiating action, co-ordination, learning and memory. Topics may vary from year to year.
Prerequisite: (BIOB30H3) or BIOB34H3 or NROB60H3
Breadth Requirement: Natural Sciences

NROC61H3 Learning and Motivation
Topics covered under the category of motivation include: physiological basis of eating, drinking and sexual behaviour, sleep, and the neural correlates of reward. Topics covered under learning include: learning categories, memory systems, and the cell and molecular basis of learning and memory.
Prerequisite: (BIOB30H3) & NROB60H3
Breadth Requirement: Natural Sciences

NROC63H3 Neuroscience Laboratory
Instruction in a variety of techniques used in investigations of nervous system function. Behavioural techniques, neurological manipulation, perfusions, histology, animal ethics and the preparation of scientific papers will be covered. Priority will be given to students enrolled in the Neuroscience Specialist Program (Co-op and Non co-op).
Prerequisite: [PSYB07H3 or STAB22H3] & NROB60H3
Exclusion: PSY399H
Enrolment Limits: 20
Breadth Requirement: Natural Sciences

NROC64H3 Sensory and Motor Systems
A focus on the mechanisms by which the nervous system processes sensory information and controls movement. The topics include sensory transduction and the sensory physiology for each of the sensory systems (olfactory, visual, somatosensory, auditory, gustatory) and models of sensory processing. Both spinal and central mechanisms of motor control are also covered.
Prerequisite: (BIOB30H3) & NROB60H3
Exclusion: PSY290H
Breadth Requirement: Natural Sciences

NROC69H3 Synaptic Organization and Physiology of the Brain
Neuronal morphology, synaptic connectivity, and molecular mechanisms of synaptic function are covered in detail. Similarities in circuitry among such diverse structures as the olfactory bulb, cerebellum, hippocampus and neocortex are examined in detail. The goal is to engender a deeper understanding of cellular mechanisms of information processing in the CNS.
Prerequisite: (BIOB30H3) & NROB60H3
Breadth Requirement: Natural Sciences

NROC90H3 NROC93H3 Supervised Study in Neuroscience
An intensive research project intended to provide laboratory/field experience in data collection and analysis. The project must be completed over 2 consecutive terms. NROC90H3 & NROC93H3 provide an opportunity to engage in research in an area after completing basic coverage in regularly scheduled courses. The student must demonstrate a background adequate for the project proposed and should present a clear rationale to prospective supervisors. Regular consultation with the supervisor is necessary, and extensive data collection and analysis will be required. Such a project will culminate in a written research report. Students must first find a supervisor before the start of the academic term in which the project will be initiated. They must then obtain a permission from the Department of Psychology's website that is to be completed and signed by the intended supervisor, and returned to the Psychology Office. At that time, the student will be provided with an outline of the schedule and general requirements for the course, including the structure of the required log-book. Students seeking supervision off campus are further advised to check the appropriateness of the proposed advisor with the Program Supervisor. If the proposed supervisor is not appointed to the Neuroscience faculty at UTSC then a secondary supervisor who is a member of the Neuroscience group at UTSC will be required.
Prerequisite: 3.0 credits in Psychology, Biology or Neurosciences & permission of instructor.
Exclusion: For NROC90H3: PSYC90H3
For NROC93H3: PSYC93H3

NROD60H3 Current Topics in Neuroscience
An intensive examination of selected issues and research problems in the Neurosciences.
Prerequisite: NROC61H3 & NROC64H3

NROD63H3 Advanced Neuroscience Laboratory
Instruction in a variety of advanced techniques used to investigate nervous system functioning. Advanced molecular and cellular histochemical techniques used in the neurosciences will be covered as well as theory, methodology, and image analysis.
Prerequisite: NROC61H3 & NROC64H3
Corequisite: PSYC08H3
Exclusion: PSY399H
Enrolment Limits: 20
Breadth Requirement: Natural Sciences

NROD66H3 Drug Addiction
An examination of the major phases of the addiction cycle, including drug consumption, withdrawal, and relapse. Consideration will be given to what basic motivational and corresponding neurobiological processes influence behaviour during each phase of the cycle. Recent empirical findings will be examined within the context of major theoretical models guiding the field.
Prerequisite: [NROC61H3 or NROC64H3] & PSYC62H3
Corequisite: PSYC08H3
Exclusion: NROD60H3 (if taken in the 2009 Fall Session)
Enrolment Limits: 20
Breadth Requirement: Natural Sciences

NROD67H3 Psychobiology of Aging
This course will characterize various anatomical, biochemical and physiological changes that occur in the nervous system with age and will explore the association between these changes and cognitive deterioration. We will examine several age-related disease states and evaluate the validity of current theories and experimental models of aging in depth.
New Media Studies

Faculty List
R. Bai, B.A., M.A. (Beijing Foreign Studies), Ph.D. (Illinois), Assistant Professor
M. Petit, M.A., Ph.D. (Colorado), Lecturer

Program Director: M. Petit Email: new-media@utsc.utoronto.ca

New Media studies critically analyzes the social, cultural, economic and political dynamics of new media; how new forms of cultural representations are created, consumed, and shared through digital media; and the effects of digital technology on traditional media forms. The Joint Program in New Media Studies allows students to combine critical study and interdisciplinary academic research at UTSC, with the technical education and industry experience offered at Centennial College’s Centre for Creative Communication.

Students in the program learn the theory, critical history, and practice of digital media as preparation for future careers in media industries. Students also have the option of qualifying for a certificate from Centennial College by enrolling in one additional summer session that includes a field placement and a professional practice course.

Because of overlaps in required coursework, students admitted to the Joint Program in New Media cannot also minor in Media Studies. Students should consider instead a Major (or Minor) in Studio.

Program Admission:
Limited enrolment.

Admission is by competitive application after the completion of 4 full credits, typically at the end of a student’s first year. Students must have a minimal 2.0 cumulative GPA to apply; to be competitive, students should have a 2.5 cumulative GPA and a 3.0 or higher GPA in Media Studies courses. Students must request the program through ROSI and submit a Supplementary Application Form directly to the program supervisor. The deadline is May 1. Students may be required to attend an interview before an admission decision is made. All applicants will be notified in early June. For more details on application procedures, see the New Media Studies section of the Joint Program website: www.utsc.utoronto.ca/~jtprogs/newMedia.html

Guidelines for 1st year course selection
Students who intend to apply to the Joint Program in New Media Studies should include MDSA01H3 Introduction to Media Studies and MDSA02H3 History of Media and Technology in their first year course selection. Students who intend to apply to the Joint Program in New Media Studies at the end of their second year, should also take MDSB61H3 Critical Approaches to Digital Media and MDSB62H3 Understanding Visual Culture. The New Media Program Overview is available at www.utsc.utoronto.ca/~humdiv/prg_newmedia.html

MAJOR (JOINT) PROGRAM IN NEW MEDIA STUDIES (ARTS)
Undergraduate Advisor: Email: nme-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete 9.0 full credits of which at least 2.0 must be at the C- or D-level, as follows:
1. 2.0 full credits:
   MDSA01H3 Introduction to Media Studies
   MDSA02H3 History of Media and Technology
2. 1.0 additional full credit from the following:
   MDSB02H3 Language and Media
   MDSB03H3 Advertising and Consumer Culture
   MDSB05H3 Media and Globalization
   MDSB06H3 Asian Visual Culture and Media
   MDSB25H3 Political Economy of Media
   MDSC01H3 Theories and Methods in Media Studies
   MDSC02H3 Topics in Media, Identities and Politics
   MDSC03H3 Legal and Ethical Issues in Media Studies
   MDSC04H3 Chinese Media and Politics
   MDSC05H3 Media and Popular Culture in East and Southeast Asia
   MDSC06H3 Old Media, New: Film and New Technology
   MDSB01H3 Senior Seminar: Topics in Media and Arts
   MDSB02H3 Senior Seminar: Topics in Media and Society

3. 0.5 credit from the following:
   CSCA08H3 Introduction to Computer Programming
   CSCA48H3 Introduction to Computer Science
   ECMC20H3 Economics of the Media
   ENGB70H3 Introduction to Cinema
   ENGC56H3 Literature and Media: From Page to Screen
   SOC44H3 Media and Society
   VPAA06H3 Visual and Performing Arts Management in the Digital Age
   VPAB05H1 Introduction to Contemporary Cultural Theory
   VPM97H3 Music, Technologies, Media
   VPSA62H3 Foundation Studies in Studio
   VPSA72H3 Introduction to Photography
   VPSA73H3 Introduction to Video
   VPSA74H3 Introduction to Digital Studio Practice
   VPSB75H3 Photo-based Work
   VPSB76H3 Intermediate Video
   VPSB80H3 Digital Studio Practice
   VPSB88H3 Introduction to Sound Art
   VPSB89H3 Introduction to Digital Animation
   VPS70H3 Theory and Practice: New Media in Studio
   WSTB13H3 Women and the Media

4. 4.5 full credits from Centennial College:
   New Media Group 1.
   Students will be eligible to enrol in New Media Group 1 courses after completing any 10 full credits including 2 full credits from category 1 and 0.5 credits from category 1 or 2.
   NME01H3 Digital Fundamentals
   NME02H3 Introduction to New Media Communications
   NME03H3 The Language of Design
   NME04H3 Interface Design, Navigation and Interaction I

   New Media Group 2.
   Students will be eligible to enrol in these courses after successfully completing all courses in New Media Group 1.
   NME05H3 Interface Design, Navigation and Interaction II
   NME06H3 Project Development and Presentation
   NME08H3 Application Software for Interactive Media
   NME09H3 Sound Design
   NME10H3 Design for New Media

5. 1.0 full credit:
   NME01H3 New Media Senior Project
   NME20H3 Theory and Practice of New Media

The following NME courses are taught at UTSC: NME01H3 and NME20H3. All other NME courses are taught at Centennial College.
NMEA01H3 Digital Fundamentals
This course introduces basic hardware and software for new media. Students will learn basics of HTML (tags, tables and frames) and JavaScript for creation of new media. Discusses hardware requirements including storage components, colour palettes and different types of graphics (bitmap vs. vector-based). Students will be introduced to a variety of software packages used in new media production. Prerequisite: 10 full credits Corequisite: NMEA02H3, NMEA03H3, NMEA04H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Social & Behavioural Sciences

NMEA02H3 Introduction to New Media Communications
This course enables students to develop strong written communications skills for effective project proposals and communications, as well as non-linear writing skills that can be applied to a wide range of interactive media projects. The course examines the difference between successful writing for print and for new media, and how to integrate text and visual material. Prerequisite: 10 full credits Corequisite: NMEA01H3, NMEA03H3, NMEA04H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: History, Philosophy & Cultural Studies

NMEA03H3 The Language of Design
This course introduces the fundamentals of two-dimensional design, graphic design theory, graphic design history, colour principles, typographic principles and visual communication theories applied to New Media Design. Working from basic form generators, typography, two-dimensional design principles, colour and visual communication strategies, learners will be introduced to the exciting world of applied graphic design and multi-media. Prerequisite: 10 full credits Corequisite: NMEA01H3, NMEA02H3, NMEA04H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Arts, Literature & Language

NMEA04H3 Interface Design, Navigation and Interaction I
This course introduces students to the discipline of user interface and software design, and in particular their impact and importance in the world of new media. The course uses theory and research in combination with practical application, to bring a user-centred design perspective to developing new media software. Prerequisite: 10 full credits Corequisite: NMEA01H3, NMEA02H3, NMEA03H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Arts, Literature & Language

NMEB05H3 Interface Design, Navigation and Interaction II
Extends work on interface design. Students have opportunities to gain real world experience in the techniques of user interface design. Participants learn to do a "requirements document" for projects, how to design an interface which meets the needs of the requirements of the document and how to test a design with real world users. Prerequisite: NMEA01H3, NMEA02H3, NMEA03H3, NMEA04H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Arts, Literature & Language

NMEB06H3 Project Development and Presentation
This course enables the participant to understand the new media production process. Learners will develop the skills to conduct benchmarking, scoping and testing exercises that lead to meaningful project planning documents. Learners will develop and manage production schedules for their group projects that support the development efforts using the project planning documents. Prerequisite: NMEA01H3, NMEA02H3, NMEA03H3, NMEA04H3 Corequisite: NMEB05H3, NMEB08H3, NMEB09H3, NMEB10H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Social & Behavioural Sciences

NMEB08H3 Application Software for Interactive Media
This course builds on NMEA01H3. It enables learners to extend their understanding of software requirements and of advanced software techniques. Software used may include Dreamweaver, Flash, Director, and animation (using Director). Prerequisite: NMEA01H3, NMEA02H3, NMEA03H3, NMEA04H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Social & Behavioural Sciences

NMEB09H3 Sound Design
This course introduces students to the scope of sound design: creative audio for new media applications. Students will work with audio applications software to sample, create and compress files, and in the planning and post-production of new media. Students will also learn to use audio in interactive ways such as soundscapes. Prerequisite: NMEA01H3, NMEA02H3, NMEA03H3, NMEA04H3 Corequisite: NMEB05H3, NMEB06H3, NMEB08H3, NMEB10H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Arts, Literature & Language

NMEB10H3 New Media Design
This course discusses the integration of multiple media with the art of good design. The course examines the conventions of typography and the dynamics between words and images, with the introduction of time, motion and sound. The course involves guest speakers, class exercises, assignments, field trips, group critiques and major projects. Prerequisite: NMEA01H3, NMEA02H3, NMEA03H3, NMEA04H3 Corequisite: NMEB05H3, NMEB06H3, NMEB08H3, NMEB09H3 Enrolment Limits: 35. This course is only open to students registered in the Joint Major Program in New Media. Breadth Requirement: Arts, Literature & Language
NMED01H3 New Media Senior Project
Students in this course develop a new media project that responds to, analyzes, or furthers their research into theoretical issues around digital media practices and artefacts. Projects may focus on digital media ranging from the internet to gaming, to social networking, including websites, CD-ROMs, DVDs, mobile apps, and Virtual and Augmented Reality technologies. Prerequisite: Completion of 15 credits including Centennial College courses listed in New Media Group 1 & New Media Group 2 Enrolment Limits: 35

NMED20H3 Theory and Practice of New Media
A seminar course providing critical reflection on digital media applications and artefacts in contemporary life, including business, information, communication, entertainment, and creative practices. Students examine the ideological, political structural, and representational assumptions underlying much of new media production and consumption from both theoretical and practice-based perspectives. Prerequisite: Completion of 15 full credits including Centennial College courses listed in New Media Group 1 & New Media Group 2 Enrolment Limits: 35 Breadth Requirement: History, Philosophy & Cultural Studies

Program Admission
Limited enrolment. Applicants must fill out a joint program supplementary application form. Prior to taking courses at Centennial College, students must also fill out a medical certificate and have current qualifications in CPR and standard first aid. Other non-academic requirements such as a vulnerable sector police check, fitness standards and face mask fit certification will also ultimately be required. Additional details regarding these requirements may be found at Centennial's website or by contacting Walter Tavares at Centennial College (WTavares@centennialcollege.ca). Applicants may arrange to complete some of these requirements during the first year of their studies at the University of Toronto Scarborough. For more information on admission and deadlines, see the Joint Programs with Centennial College section of this Calendar.

Program Requirements
Note: In order to remain in the program, students must typically maintain a cumulative grade point average of at least 2.0. Students whose cumulative GPA falls below 2.0 should consult the program supervisor to discuss their options. Please note, space in some Centennial College courses is limited. Students who must repeat one of these courses and whose CGPA has fallen below 2.0, will be allowed to register in these courses only if space permits. Please note that 20 credits are required to complete a degree. In the case of the Joint Paramedicine Specialist Program these 20 credits include the 18 required credits and 2 elective credits. Students should ensure that they are familiar with the UTSC Degree Requirements.

Program Requirements (Note: suggested course sequences follow below)

1.0 Credit of Introductory Biology Courses
BIOA01H3 Life on Earth: Unifying Principles
BIOA02H3 Life on Earth: Form, Function and Interactions

2.0 Credits of Core Biology Courses
BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Genetic Processes
(BIOB30H3 Mammalian Physiology I) or BIOB34H3 Animal Physiology
BIOB33H3 Human Development and Anatomy
2.0 Credits of Foundational Biology Courses
BIOC15H3 Genetics
BIOC17H3 Microbiology: The Bacterial Cell
BIOC21H3 Vertebrate Histology: Cells and Tissues or BIOC32H3 Human Physiology I
BIOC33H3 Human Physiology II: Lecture and Laboratory

1.0 Credit of Advanced Biology Courses
Choose From:
BIOD17H3 Seminars in Cellular Microbiology
BIOD33H3 Comparative Animal Physiology
BIOD65H3 Pathologies of the Nervous System
BIOD26H3 Fungal Biology and Pathogenesis
BIOD43H3 Animal Movement and Exercise
BIOD29H3 Pathobiology of Human Disease
BIOD96Y3 Directed Research in Paramedicine

1.0 Credit of Introductory Chemistry Courses
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

1.0 Credit of Introductory Psychology Courses
PSYA01H3 Introductory Psychology: Part I
PSYA02H3 Introductory Psychology: Part II

1.0 Credit of B-Level Psychology Courses
PSYB20H3 Introduction to Developmental Psychology
PSYB32H3 Abnormal Psychology

1.0 Credit of Statistics/Data Analysis Courses
STAB22H3 Statistics I
or
PSYB07H3 Data Analysis in Psychology
PSYC08H3 Advanced Data Analysis in Psychology

Note: Students who do not take PSYB07H3 must complete an upgrade module prior to taking PSYC08H3.

7.0 Credits of Paramedicine Courses
*PMDB22H3 Pre-Hospital Care 1: Theory and Lab
*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis
*PMDB30H3 Alterations of Human Body Function I
*PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
*PMDB36H3 Pharmacology for Allied Health Pre-requisite
*PMDB41H3 Professional Issues, Research and Leadership
*PMDC40H3 Alterations in Human Body Function II
*PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
*PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
*PMDC45Y3 Pre-Hospital Care 4: Theory, Lab and Field
*PMDC56H3 Primary Care Practice Integration and Decision Making
* A grade of 60% is required in these courses both to pass the course and to maintain standing in the program. All PMD courses are taught at Centennial College. Note, some PMD courses require that 60% be achieved in all components of the course (i.e., lecture component, practical component, and clinical-placement component).

1.0 Credit of C-Level Anthropology Courses
ANTC67H3 Foundations in Epidemiology
ANTC68H3 Deconstructing Epidemics

Suggested Program Sequence
Note: Students may also take courses in the summer, when offered. BIOB10Y3 may be taken in the summer in place of BIOB10H3 & BIOB11H3.

Year 1: Fall Session
a. BIOA01H3 Life on Earth: Unifying Principles
b. CHMA10H3 Introductory Chemistry I: Structure and Bonding
c. PSYA01H3 Introductory Psychology: Part I
d. PSYB07H3 Data Analysis in Psychology (fall) & 0.5 credits of elective courses 
   or 1.0 credits of elective courses

Year 1: Winter Session
a. BIOA02H3 Life on Earth: Form, Function and Interactions  
b. CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms  
c. PSYB02H3 Introductory Psychology: Part II  
d. STAB22H3 Statistics I & 0.5 credits of elective courses  
   or 1.0 credits of elective courses

Year 2: Fall Session
a. BIOB10H3 Cell Biology  
b. BIOB33H3 Human Development and Anatomy  
c. PMDB22H3 Pre-Hospital Care 1: Theory and Lab  
d. PMDB25H3 Therapeutic Approaches to Behaviour in Crisis  
e. PMDB41H3 Professional Issues, Research and Leadership

Year 2: Winter Session
a. (BIOB30H3 Mammalian Physiology I ) or BIOB34H3 Animal Physiology  
b. PMDC40H3 Alterations in Human Body Function II  
c. PMDC42Y3 Pre-Hospital Care 2: Theory, Lab and Clinical  
d. PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities

Year 3: Fall Session
a. BIOC17H3 Microbiology: The Bacterial Cell  
b. BIOC33H3 Human Physiology II: Lecture and Laboratory  
c. PMDC54Y3 Pre-Hospital Care 3: Theory, Lab and Field  
d. PMDC56H3 Primary Care Practice Integration and Decision Making

Year 3: Winter Session
a. BIOC15H3 Genetics  
b. BIOC21H3 Vertebrate Histology: Cells and Tissues  
c. PSYB20H3 Introduction to Developmental Psychology  
d. PSYB32H3 Abnormal Psychology  
e. BIOD33H3 Comparative Animal Physiology or BIOD65H3 Pathologies of the Nervous System or BIOD26H3 Fungal Biology and Pathogenesis or BIOD96Y3 Directed Research in Paramedicine*

Year 4: Fall Session
a. PSYC08H3 Advanced Data Analysis in Psychology  
b. ANTC67H3 Foundations in Epidemiology  
c. ANTC68H3 Deconstructing Epidemics  
d. BIOD17H3 Seminars in Cellular Microbiology or BIOD43H3 Animal Movement and Exercise or BIOD29H3 Pathobiology of Human Disease  
e. 0.5 credits of elective courses

Year 4: Winter Session
a. PSYC08H3 Advanced Data Analysis in Psychology  
b. ANTC67H3 Foundations in Epidemiology  
c. ANTC68H3 Deconstructing Epidemics  
d. BIOD17H3 Seminars in Cellular Microbiology or BIOD43H3 Animal Movement and Exercise or BIOD29H3 Pathobiology of Human Disease  
e. 0.5 credits of elective courses

Note: Students may take any 2 of these D-level courses to meet program requirements. The sequence here merely reflects current scheduling of courses in the various sessions.

PMBDB22H3 Pre-hospital Care 1: Theory and Lab

Allows students to develop the critical thinking skills and problem solving approaches needed to provide quality pre-hospital emergency care. Emphasizes the components of primary and second assessment, and the implementation of patient care based on interpretation of assessment findings. Discusses principles of physical and psycho-social development, and how these apply to the role of the paramedic. Students must pass each component (theory and lab) of the course to be successful. This course is taught at the Centennial HP Science and Technology Centre.  
Prerequisite: BIOA01H3 & BIOA02H3  
Corequisite: PMDB25H3, PMDB41H3, BIOB33H3  
Enrolment Limits: Enrolment is restricted to students in the Specialist Program in Paramedicine.  
Breadth Requirement: Social & Behavioural Sciences  

PMBDB25H3 Therapeutic Communications and Crisis Intervention

Focuses on the utilization of effective communication tools when dealing with persons facing health crisis.
Students will learn about coping mechanisms utilized by patients and families, and the effects of death and dying on the individual and significant others. Students will have the opportunity to visit or examine community services and do class presentations. This course is taught at the Centennial HP Science and Technology Centre.

**PMDB41H3 Professional and Legal Issues, Research, Responsibilities and Leadership**  
Discusses the changing role of the paramedic and introduces the student to the non-technical professional expectations of the profession. Introduces fundamental principles of medical research and professional principles. Topics covered include the role of professional organizations, the role of relevant legislation, the labour/management environment, the field of injury prevention, and basic concepts of medical research. This course is taught at the Centennial HP Science and Technology Centre.

**PMDB30H3 Alterations of Human Body Function I**  
Discusses how human body function is affected by a variety of patho-physiological circumstances. The theoretical framework includes the main concepts of crisis, the adaptation of the body by way of compensatory mechanisms, the failure of these compensatory mechanisms and the resulting physiological manifestations. Students will learn to identify such manifestations. This course is taught at the Centennial HP Science and Technology Centre. Prerequisite: PMDB22H3, PMDB25H3, PMDB41H3, BIOB33H3  
Corequisite: PMDB32Y3, PMDB36H3  
Enrolment Limits: Enrolment is restricted to students in the Specialist Program in Paramedicine  
Breadth Requirement: History, Philosophy & Cultural Studies

**PMDB32Y3 Pre-hospital Care 2: Theory, Lab and Clinical**  
Provides the necessary knowledge, skill and value base that will enable the student to establish the priorities of assessment and management for persons who are in stress or crisis due to the effects of illness or trauma. The resulting patho-physiological or psychological manifestations are assessed to determine the degree of crisis and/or life threat. Students must pass each component (theory, lab and clinical) of the course to be successful. This course is taught at the Centennial HP Science and Technology Centre. Prerequisite: PMDB22H3, PMDB25H3, PMDB41H3, BIOB33H3  
Corequisite: PMDB30H3, PMDB36H3  
Enrolment Limits: Enrolment is limited to students in the Specialist Program in Paramedicine  
Breadth Requirement: Natural Sciences

**PMDB36H3 Pharmacology for Allied Health**  
Introduces principles of Pharmacology, essential knowledge for paramedics who are expected to administer medications in Pre-hospital care. Classifications of drugs will be discussed in an organized manner according to their characteristics, purpose, physiologic action, adverse effects, precautions, interactions and Pre-hospital applications. Students will use a step-by-step process to calculate drug dosages. This course is taught at the Centennial HP Science and Technology Centre. Prerequisite: PMDB22H3, PMDB25H3, PMDB41H3, BIOB33H3  
Corequisite: PMDB30H3, PMDB32Y3  
Enrolment Limits: Enrolment is limited to students in the Specialist Program in Paramedicine  
Breadth Requirement: Natural Sciences

**PMDB43H3 Medical Directed Therapeutics and Paramedic Responsibilities**  
Applies concepts and principles from pharmacology, pathophysiology and pre-hospital care to make decisions and implementation of controlled or delegated medical acts for increasingly difficult case scenarios in a class and lab setting. Ethics and legal implications/responsibilities of actions will be integrated throughout the content. Patient care and monitoring of intravenous fluid administration. This course is taught at the Centennial HP Science and Technology Centre.
Prerequisite: PMDB30H3, PMDB32Y3, PMDB36H3, BIOB11H3
Corequisite: PMDC40H3, PMDC42Y3
Enrolment Limits: Enrolment is limited to students in the Specialist Program in Paramedicine
Breadth Requirement: History, Philosophy & Cultural Studies

PMDC54Y3 Pre-hospital Care 4: Theory, Lab and Field
Combines theory, lab and field application. New concepts of paediatric trauma and Basic Trauma Life Support will be added to the skill and knowledge base. Students will be guided to develop a final portfolio demonstrating experiences, reflection and leadership. Students must pass each component (theory, lab and field) of the course to be successful. This course is taught at the Centennial HP Science and Technology Centre.
Prerequisite: PMDC40H3, PMDC42Y3, PMDC43H3
Corequisite: PMDC56H3
Enrolment Limits: Enrolment is limited to students in the Specialist Program in Paramedicine
Breadth Requirement: Natural Sciences

PMDC56H3 Primary Care Paramedic Integration and Decision Making
Challenges students with increasingly complex decisions involving life-threatening situations, ethical-legal dilemmas, and the application of sound foundational principles and knowledge of pharmacology, patho-physiology, communication, assessment and therapeutic interventions. Students will analyze and discuss real field experiences and case scenarios to further develop their assessment, care and decision-making. This course is taught at the Centennial HP Science and Technology Centre.
Prerequisite: PMDC40H3, PMDC42Y3, PMDC43H3
Corequisite: PMDC54Y3
Enrolment Limits: Enrolment is limited to students in the Specialist Program in Paramedicine
Breadth Requirement: Natural Sciences

BIOD96Y3 Directed Research in Paramedicine
See the Biological Sciences section of this Calendar for a full course description

Philosophy

Faculty List
W.C. Graham, M.A., Ph.D. (Toronto), Professor Emeritus
L.M. Lange, B.A., M.A. (Manitoba), Ph.D. (Toronto), Professor Emerita
W.E. Seager, M.A. (Alberta), Ph.D. (Toronto), Professor
B. Hellie, B.A. (Stanford), Ph.D. (Princeton), Associate Professor
P.A. Kremer, B.Sc. (Toronto), Ph.D. (Pittsburgh), Associate Professor
S. Sedivy, B.A. (Toronto), Ph.D. (Pittsburgh), Associate Professor
J. Wilson, B.A. (U.C. San Diego), Ph.D. (Cornell), Associate Professor
K. Huebner, B.A. (Williams), M.A. (Warwick), Assistant Professor

Program Director: W. Seager Email: philosophy-program-supervisor@utsc.utoronto.ca

Philosophy is the study of the ideas that shape our thought and activity. While we do discuss controversial issues in politics, morality, science, religion, art, etc., philosophy is more concerned with the ideas that underlie all such debates. We consider what the role of government should be, what reasons there could be to describe anything as good or bad, what proves that something is true, whether there could be a reality beyond the physical world, and whether the only value of art is the pleasure it gives. Such questions have been answered in a variety of theories, and any study in philosophy begins with learning what others have thought; but our purpose is not primarily to be historians of ideas, and assignments focus on developing the intellectual abilities and techniques required to think effectively for oneself at this deeper level. Therefore, philosophy emphasizes interpretation and original thought, reasoning, discussion and assessment.

PHLA10H3 and PHLA11H3 are a survey of the main topic-areas of philosophy. They are recommended both as courses of general interest and as an introduction to the Major and Specialist Programs.

B-level courses address specific topics such as theories of human nature, theories of mind, theories of knowledge, metaphysics, techniques of argumentation, ethics, politics, feminism, and art as well as specific periods in the History of Philosophy. Since they have no prerequisites they also serve as entry-points to philosophy.

C-level seminars in Philosophy are advanced courses for students with typically 1.5 credits in Philosophy. (Instructors will admit students whose courses have adequately prepared them for a seminar. Students must provide transcripts when requesting special permission to enrol in a seminar.)

D-level seminars in Philosophy are advanced courses for students with 3.5 credits in philosophy including 1.0 credit at the C-level. (Instructors will admit students whose courses have adequately prepared them for a seminar. Students must provide transcripts when requesting special permission to enrol in a seminar.)

D-level independent study courses are intended for qualified students who wish to engage in advanced level work on a well-defined topic of their choice. These courses are only available with the prior agreement of an instructor.

Guidelines for 1st year course selection
Students who intend to complete a Philosophy program should include PHLA10H3 & PHLA11H3 in their 1st year course selection. Students are also strongly encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their studies.
SPECIALIST PROGRAM IN PHILOSOPHY (ARTS)
Program Supervisor: W. Seager Email: philosophy-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete at least 12.0 credits in Philosophy including PHLB50H3 Symbolic Logic I or PHLB55H3 Puzzles and Paradoxes, and at least 4.0 credits at the C- or D-level of which 1.0 must be at the D-level. MATC09H3 can be used as a Philosophy course for these purposes. Students are encouraged, though not required, to complete at least 0.5 credit as a reading course at the D-level.

Note: PHLB99H3 Writing Philosophy, is strongly recommended for the Philosophy Specialist and Major programs and is important preparation for advanced C- and D-level studies in Philosophy.

MAJOR PROGRAM IN PHILOSOPHY (ARTS)
Program Supervisor: W. Seager Email: philosophy-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete at least 7.0 credits in Philosophy including PHLB50H3 Symbolic Logic I or PHLB55H3 Puzzles and Paradoxes and at least 2.0 credits must be at the C- or D-level. MATC09H3 can be used as a Philosophy course for these purposes. Note: PHLB99H3 Writing Philosophy, is strongly recommended for the Philosophy Specialist and Major programs and is important preparation for advanced C- and D-level studies in Philosophy.

MINOR PROGRAM IN PHILOSOPHY (ARTS)
Program Supervisor: W. Seager Email: philosophy-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 4.0 credits in Philosophy of which at least 1.0 credit must be at the C- or D-level. MATC09H3 can be used as a Philosophy course for these purposes.

PHLA10H3 Reason and Truth
An introduction to philosophy focusing on issues of rationality, metaphysics and the theory of knowledge. Topics may include: the nature of the mind, freedom, the existence of God, and the nature and knowability of reality. These topics will generally be introduced through the study of key texts from the history of philosophy.
Breadth Requirement: History, Philosophy & Cultural Studies

PHLA11H3 Introduction to Ethics
Ethics is concerned with concrete questions about how we ought to treat one another as well as more general questions about how to justify our ethical beliefs. This course is an introduction that both presents basic theories of ethics and considers their application to contemporary moral problems.
Exclusion: PHL275H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB02H3 Environmental Ethics
This course examines ethical issues raised by our actions and our policies for the environment. Do human beings stand in a moral relationship to the environment? Does the environment have moral value and do non-human animals have moral status? These fundamental questions underlie more specific contemporary issues such as sustainable development, alternative energy, and animal rights.
Recommended Preparation: PHLA11H3
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB03H3 Philosophy of Art
An examination of challenges posed by the radical changes and developments in modern and contemporary art forms. For example, given the continuously exploding nature of art works, what do they have in common - what is it to be an artwork?
Exclusion: PHL285H
Breadth Requirement: Arts, Literature & Language

PHLB04H3 Philosophy and Literature
This course examines some of the classic problems concerning literary texts, such as the nature of interpretation, questions about the power of literary works and their relationship to ethical thought, and problems posed by fictional works - how can we learn from works that are fictional and how can we experience genuine emotions from works that we know are fictional?
Breadth Requirement: Arts, Literature & Language

PHLB05H3 Social Issues
An examination of contemporary or historical issues that force us to consider and articulate our values and commitments. The course will select issues from a range of possible topics, which may include globalization, medical ethics, war and terrorism, the role of government in a free society, equality and discrimination.
Breadth Requirement: Social & Behavioural Sciences

PHLB06H3 Business Ethics
An examination of philosophical issues in ethics, social theory, and theories of human nature as they bear on business. What moral obligations do businesses have? Can social or environmental costs and benefits be calculated in a way relevant to business decisions? Do political ideas have a role within business?
Exclusion: MGTC59H3, PHL295H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB07H3 Happiness and Freedom
What is well-being? What is autonomy? These two notions are central in ethical theory, law, bioethics, and in the popular imagination. In this course we will explore well-being and autonomy in more depth, and then consider how our views about well-being and autonomy shape our views about ethics.
What is feminism? What is a woman? Or a man? Are

PHLB13H3 Philosophy of Education
A philosophical study of the nature, practice and value of education. Major philosophical accounts of education will be examined. Topics to be considered may include: the nature, aims, and content of education, education and indoctrination, the role and justification of educational institutions, authority and freedom in the school.
Exclusion: PHL272H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB16H3 Political Philosophy: Ancient Greece and the Middle Ages
This course will introduce some important thinkers in political philosophy, such as Plato, Aristotle, Augustine and Aquinas.

PHLB17H3 Political Philosophy: The Modern Period
This course will introduce some important thinkers in political philosophy from the 15th Century to the 19th Century. These may include Thomas Hobbes, John Locke, Jean-Jacques Rousseau, G.W.F. Hegel, John Stuart Mill, or Karl Marx.
Exclusion: PHL265H.
Note: PHLB17H3 may not be taken after or concurrently with POLB71H3
Breadth Requirement: History, Philosophy & Cultural Studies
PHLB50H3 Symbolic Logic I
An introduction to formal, symbolic techniques of reasoning. Sentential logic and quantification theory (or predicate logic), including identity will be covered. The emphasis is on appreciation of and practice in techniques, for example, the formal analysis of English statements and arguments, and for construction of clear and rigorous proofs. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHLB55H3
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB53H3 The Art of Thinking
A study of methods and techniques for developing effective reasoning and argumentation. This course aims to develop skill in identifying ambiguities, evaluating premises, constructing counter-examples, and reconstructing arguments. This course provides an important foundation for Philosophy students, while offering essential critical skills for all students, no matter what their Program. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL245H
Breadth Requirement: Quantitative Reasoning

PHLB55H3 Puzzles and Paradoxes
Philosophy often begins with a puzzle or paradox. Zeno once convincingly argued that motion was impossible, but people continue to move. The "liar's paradox" seems to show that everything is both true and false, but that cannot be right. In this course, we will puzzle through these and related issues. Recommended preparation: PHLA10H3 or PHLA11H3
Breadth Requirement: Quantitative Reasoning

PHLB60H3 Metaphysics
A consideration of problems in metaphysics: the attempt to understand 'how everything fits together' in the most general sense of this phrase. Some issues typically covered include: the existence of God, the nature of time and space, the nature of mind and the problem of the freedom of the will. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB70H3 Philosophy of Science
A study of philosophical questions raised by the natural and social sciences. Topics discussed may include: the nature of rationality and the role of values in science, the description of scientific methodology, the structure of scientific theory, and the question of how or in what sense science progresses. Recommended preparation: one full or half credit course in Philosophy or in one of the Sciences
Exclusion: HPS250H, PHL255H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB72H3 Metaphysics of Science: Emergence and Reduction in the Sciences
How are special science entities (treated by chemistry, biology, psychology) related lower-level, fundamentally physical entities? Are higher-level entities "nothing over and above" or rather somehow "emergent" from lower-level entities? In this course we will identify and assess a variety of metaphysical options for understanding such intertheoretic relations. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: (PHL231H)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB80H3 Philosophy of Language
An examination of philosophical issues about language. Philosophical questions to be covered include: what is the relation between mind and language, what is involved in linguistic communication, is language an innate biological feature of human beings, how do words manage to refer to things, and what is meaning. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL240H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB81H3 Theories of Mind
An examination of questions concerning the nature of mind. Philosophical questions considered may include: what is consciousness, what is the relation between the mind and the brain, how did the mind evolve and do animals have minds, what is thinking, what are feelings and emotions, and can machines have minds. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL240H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB86H3 Foundations of Cognitive Science
A study of the hypotheses and theories that ground cognitive science. Fundamental questions include: what is a computational system and how can a physical system think and understand language? The course examines the functionalist theory of mind, the relationship between syntax and semantics, and the theory of interpretable formal systems. Recommended preparation: Social & Behavioural Sciences

PHLB91H3 Theories of Human Nature
An exploration of theories which provide answers to the question 'What is a human being?', answers that might be summarized with catchphrases such as: 'Man is a rational animal,' 'Man is a political animal,' 'Man is inherently individual,' 'Man is inherently social,' etc. Authors studied are: Aristotle, Hobbes, Rousseau, Darwin, Marx, Freud and Sartre. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLB99H3 Writing Philosophy
Philosophical writing emphasizes clear reasoning. Students will learn to analyze texts, to discern and assess argument structure, and to develop techniques for writing a clear well-argued analysis of a subject matter. These key writing skills lie at the core of philosophical method and they are also applicable across subject areas and disciplines. This course is strongly recommended for philosophy specialists and majors, open to philosophy minors, and open to all other students by permission of the instructor. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC86H3 Foundations of Cognitive Science
A study of the hypotheses and theories that ground cognitive science. Fundamental questions include: what is a computational system and how can a physical system think and understand language? The course examines the functionalist theory of mind, the relationship between syntax and semantics, and the theory of interpretable formal systems. Recommended preparation: Social & Behavioural Sciences

PHLC91H3 Theories of Human Nature
An exploration of theories which provide answers to the question 'What is a human being?', answers that might be summarized with catchphrases such as: 'Man is a rational animal,' 'Man is a political animal,' 'Man is inherently individual,' 'Man is inherently social,' etc. Authors studied are: Aristotle, Hobbes, Rousseau, Darwin, Marx, Freud and Sartre. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC99H3 Writing Philosophy
Philosophical writing emphasizes clear reasoning. Students will learn to analyze texts, to discern and assess argument structure, and to develop techniques for writing a clear well-argued analysis of a subject matter. These key writing skills lie at the core of philosophical method and they are also applicable across subject areas and disciplines. This course is strongly recommended for philosophy specialists and majors, open to philosophy minors, and open to all other students by permission of the instructor. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC03H3 Topics in the Philosophy of Art
An exploration of some current issues concerning the various forms of art such as: the role of the museum, the loss of beauty and the death of art. Recommended preparation: PHLA10H3 or PHLA11H3
Exclusion: PHL244H, (PHLC91H3)
Breadth Requirement: History, Philosophy & Cultural Studies
PHLC05H3 Ethical Theory
Philosophers offer systematic theories of ethics: theories that simultaneously explain what ethics is, why it matters, and what it tells us to do. This course is a careful reading of classic philosophical texts by the major systematic thinkers in the Western tradition of ethics. Particular authors read may vary from instructor to instructor.
Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB07H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: (PHLC01H3), PHL375H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC06H3 Topics in Ethical Theory
Phsophical ethics simultaneously aims to explain what ethics is, why it matters, and what it tells us to do. This is what is meant by the phrase “ethical theory.” In this class we will explore specific topics in ethical theory in some depth. Specific topics may vary with the instructor.
Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB07H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: (PHLC01H3), PHL375H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC13H3 Topics in Philosophy and Feminism
Feminist philosophy includes both criticism of predominant approaches to philosophy that may be exclusionary for women and others, and the development of new approaches to various areas of philosophy. One or more topics in feminist philosophy will be discussed in some depth. Particular topics will vary with the instructor.
Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB07H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: (PHLC01H3), PHL375H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC20H3 Topics in the Theory of Knowledge
A follow up to PHLB20H3. This course will consider one or two epistemological topics in depth, with an emphasis on class discussion.
Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H3] and 1.0 additional credit in Philosophy
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC23H3 Topics in Ancient Philosophy
This course focuses on the thought of Plato and Aristotle, with some attention paid to the pre-Socratics and Hellenistic thinkers, including ancient atomists and the Stoics.
Prerequisite: 5.0 full credits, including one of [PHLB16H3, PHLB17H3, PHLB31H3, PHLB33H3, PHLB35H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: (PHLC30H3), PHL30H3, PHL304H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC35H3 Topics in Early Modern Philosophy: Rationalism
In this course we study the major figures of early modern rationalism, Descartes, Spinoza, and Leibniz, with a particular emphasis on topics such as substance, knowledge and sense perception, the mind-body problem, and the existence and nature of God.
Prerequisite: 5.0 full credits, including one of [PHLB16H3, PHLB17H3, PHLB31H3, PHLB33H3, PHLB35H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: PHL310H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC36H3 Topics in Early Modern Philosophy: Empiricism
In this course we study major figures of early modern empiricism, Locke, Berkeley, Hume, with a particular emphasis on topics such as substance, knowledge and sense perception, the mind-body problem, and the existence and nature of God.
Prerequisite: 5.0 full credits, including one of [PHLB16H3, PHLB17H3, PHLB31H3, PHLB33H3, PHLB35H3, PHLB36H3] and 1.0 additional credit in Philosophy
Exclusion: PHL311H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC37H3 Kant
This course focuses on the thought of Immanuel Kant, making connections to some of Kant’s key predecessors such as Hume or Leibniz. The course will focus either on Kant’s metaphysics and epistemology, or his ethics, or his aesthetics.
Prerequisite: 1.5 full credits in Philosophy, including at least one course in the history of philosophy.
Exclusion: PHL314H
Recommended Preparation: PHLB33H3 or PHLB35H3 or PHLB36H3
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC43H3 History of Analytic Philosophy I
This course explores the foundation of Analytic Philosophy in the late 19th and early 20th century, concentrating on Frege, Russell, and Moore. Special attention paid to the discovery of mathematical logic, its motivations from and consequences for metaphysics and the philosophy of mind.
Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H3] and one of [PHLB50H3, PHLC51H3, (PHLC54H3), MATC09H3] and 0.5 additional credits in Philosophy
Exclusion: PHL325H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLC51H3 Symbolic Logic II
After consolidating the material from Symbolic Logic I, we will introduce necessary background for metalogic, the study of the properties of logical systems. We will introduce set theory, historically developed in parallel to logic. We conclude with some basic metatheory of the propositional logic learned in Symbolic Logic I.
Prerequisite: PHLB50H3 or CScB36H3 or MATB24H3 or MATB43H3
Exclusion: MATC09H3, PHL345H
Breadth Requirement: Quantitative Reasoning

PHLC55H3 Philosophy of Mathematics
What are numbers? Are they physical? Mental? Created by humans? How do we know anything about numbers, if we...
never see or touch them? What is mathematical truth? Such questions should concern mathematics students interested in the foundations of mathematics; and philosophy students, as a rich source of philosophical puzzle.

Prerequisite: [Two MAT courses & one PHL course] or [One MAT course & [PHLB05H3 & one other PHL course]]

Exclusion: PHL346H

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC60H3 Topics in Metaphysics**

A follow up to PHLB60H3. This course will consider one or two metaphysical topics in depth, with an emphasis on class discussion.

Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H3] and 1.0 additional credit in Philosophy

Exclusion: PHL331H, PHL332H (UTM only)

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC72H3 Topics in the Philosophy of Science**

A follow up to PHLB70H3. This course will consider one or two topics in the Philosophy of Science in depth, with an emphasis on class discussion.

Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC84H3 Seminar in Philosophy: Postcolonial Studies in Philosophy**

A critical postcolonial examination of some aspects of western European philosophy. How has western philosophy been shaped by the colonization of other parts of the globe? We will examine modern western philosophy's ideals of rationality, universality, and progress in this light.

Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB10H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC86H3 Issues in the Philosophy of Mind**

Advance Issues in the Philosophy of Mind. For example, an examination of arguments for and against the idea that machines can be conscious, can think, or can feel. Topics may include: Turing's test of machine intelligence, the argument based on Gödel's theorem that there is an unbridgeable gulf between human minds and machine capabilities, Searle's Chinese Room thought experiment.

Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H1H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC89H3 Topics in Analytic Philosophy**

Advanced topic(s) in Analytic Philosophy. Sample contemporary topics: realism/antirealism; truth; interrelations among metaphysics; epistemology; philosophy of mind and of science.

Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB72H3, PHLB80H3, PHLB81H3, PHLB86H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC92H3 Topics in Contemporary Political Philosophy**

An examination of some central philosophical problems of contemporary political philosophy.

Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB07H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC93H3 Seminar in Philosophy: Justice**

A discussion of the question 'What is justice?' The question has been asked since the time of Plato, but seems to resist definitive answers. This course will examine debates about justice in recent political philosophy. Authors discussed may include: John Rawls, Robert Nozick, Bruce Ackerman, Michale Sandel, Iris Young.

Prerequisite: 5.0 full credits, including one of [PHLB02H3, PHLB05H3, PHLB06H3, PHLB07H3, PHLB08H3, PHLB09H3, PHLB36H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC95H3 Topics in the Philosophy of Mind**

Advanced topics in the Philosophy of mind, such as an exploration of philosophical problems and theories of consciousness. Topics to be examined may include: the nature of consciousness and 'qualitative experience', the existence and nature of animal consciousness, the relation between consciousness and intentionality, as well as various philosophical theories of consciousness.

Prerequisite: 5.0 full credits, including one of [PHLB20H3, PHLB55H3, PHLB60H3, PHLB70H3, PHLB80H3, PHLB81H3, PHLB86H3] and 1.0 additional credit in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLC99H3 Proseminar in Philosophy**

This is an intensive seminar for students specializing and majoring in philosophy. The course will develop advanced philosophical skills by focusing on textual analysis, argumentative techniques, writing and oral presentation. The course also aims to foster a cohesive cohort among philosophy specialists and majors. Each year, the course will focus on a different topic drawn from the core areas of philosophy for its subject matter. This course is strongly recommended for Philosophy Specialists and Majors.

Prerequisite: 1.5 credits in Philosophy

Breadth Requirement: History, Philosophy & Cultural Studies

**PHLD35H3 Advanced Seminar in Rationalism**

This course offers in-depth examination of the philosophical approach offered by one of the three principal courses at the C-level, at least one course in the history of philosophy at the C-level.

Enrolment Limits: 20

Breadth Requirement: History, Philosophy & Cultural Studies
PHLD43H3 Advanced Seminar in History of Analytic Philosophy

This course examines Analytic Philosophy in the mid-20th century, concentrating on Wittgenstein, Ramsey, Carnap, and Quine. Special attention paid to the metaphysical foundations of logic, and the nature of linguistic meaning, including the relations between "truth-conditional" and "verificationist" theories.

Prerequisite: PHLC43H3
Exclusion: PHL325H, (PHLC44H3)
Breadth Requirement: History, Philosophy & Cultural Studies

PHLD51H3 Metalogic

Symbolic Logic deals with formal languages: you work inside formal proof systems, and also consider the "semantics", dealing with truth, of formal languages. Instead of working inside formal systems, Metalogic treats systems themselves as objects of study, from the outside.

Prerequisite: PHLC51H3
Exclusion: PHL348H, (PHLC54H3)
Breadth Requirement: Quantitative Reasoning

PHLD79H3 Advanced Seminar in Metaphysics of Mind: the Metaphysics of Persons

What is a person? Are persons primarily physical, primarily psychological, or both? What physical and psychological changes can a person undergo and still be the same person? In this course, we will explore several answers to these questions, offered by philosophers including Plato, Aristotle, Locke, Hume, Parfit, Lewis, and others.

Prerequisite: 3.5 credits in Philosophy, at least 1.0 credit at the C-level.
Enrolment Limits: 20

PHLD87H3 Advanced Seminar in Philosophy of Mind

This course offers in-depth examination of selected contemporary theories and issues in philosophy of mind, such as theories of perception or of consciousness, and contemporary research examining whether minds must be embodied or embedded in a larger environment.

Prerequisite: 3.5 credits in Philosophy, including at least 2 half credit courses at the C-level, including PHLC95H3 or PHLC86H3. Exclusion: PHL405H
Recommended Preparation: PHLC95H
Breadth Requirement: History, Philosophy & Cultural Studies

PHLD90H3
PHLD91H3
PHLD92H3
PHLD93H3
PHLD94H3
PHLD95H3
PHLD96H3
PHLD97H3
PHLD98H3
PHLD99H3 Independent Study

These courses are intended for qualified students who wish to engage in advanced level work on a well-defined topic of their choice. These courses are only available with the prior arrangement of the instructor.

Physical Sciences

The following Specialist Programs are offered by the Department of Physical and Environmental Sciences:

- Biological Chemistry
- Chemistry
- Environmental Biology
- Environmental Chemistry
- Environmental Geosciences
- Environmental Physics
- Environmental Science and Technology
- Physical and Mathematical Sciences
- Physics and Astrophysics

The following Major Programs are offered by the Department of Physical and Environmental Sciences:

- Biochemistry
- Chemistry
- Environmental Science
- Physical Sciences
- Physics and Astrophysics

The Department also offers a Minor Program in Environmental Science and the Minor Program in Astronomy and Astrophysics. For more information on these programs, see the appropriate section of this Calendar.

Students are strongly advised to take the courses in the sequence recommended by their program(s) of choice. Irreconcilable timetable differences may arise if courses are delayed to later years. Students should pay careful attention to all pre- and co-requisite courses to ensure that they are eligible to take their courses at the proper time. Some C- and D-level courses are offered in alternate years. Students are advised to consult with their Program Supervisor(s) to find out when particular courses will be available.
Service Learning and Outreach (Previously known as Science Engagement)
For experiential learning through community outreach, classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

CO-OPERATIVE PROGRAM IN PHYSICAL SCIENCES
Supervisor of Studies: S. Dalili (416-287-7215) Email: sdalili@utsc.utoronto.ca
Co-op Contact: askcoop@utsc.utoronto.ca
The Co-operative Program in Physical Sciences allows students to combine their chosen academic program with an integrated and complementary work experience. Students are required to complete any one of the Specialist Programs offered by the Department of Physical and Environmental Sciences or the Department of Computer and Mathematical Sciences, except those in Computer Science and the Joint Specialist Program in Environmental Science and Technology, or an approved combination of two Major Programs within their 20-credit degree program. They will also complete three work terms of four months each, as well as a specially designed series of enhancement seminars. The overall purpose of the Co-op Program is to provide for students an educational milieu that will allow them to develop as highly qualified scientists, with excellent experience in both the academic and workplace environments.

For information on fees, work terms, and studying in the program, please see the Co-operative Programs section of this Calendar.

Note: The Co-op in Computer Science is not part of the Physical Sciences Co-op. For more information on it, see the Computer Science section of this Calendar.

Eligible Programs of Study for Co-op:
Students may take any of the Specialist Programs offered in the Department of Physical and Environmental Sciences or the Department of Computer and Mathematical Sciences, except those in Computer Science and the Joint Specialist Program in Environmental Science and Technology. Currently, these Programs are:
• Biological Chemistry
• Chemistry
• Environmental Biology
• Environmental Chemistry
• Environmental Geosciences
• Environmental Physics
• Mathematics
• Physical and Mathematical Sciences
• Physics and Astrophysics
• Quantitative Analysis

Alternatively, with the approval of the Co-op Supervisor of Studies, students may select one of the Major Programs offered in the Department of Physical and Environmental Sciences or the Department of Computer and Mathematical Sciences, except for Computer Science, as their primary major, and take this in combination with a second Major Program thus fulfilling the requirements for the 20 credit degree. Currently, the eligible Major Programs are:
• Biochemistry
• Chemistry
• Environmental Science
• Mathematics
• Physics and Astrophysics
• Physical Sciences
• Statistics

The second major may be from those offered in the Department of Physical and Environmental Sciences, or from another Department. All double-major combinations must be discussed with and approved by the Supervisor of Studies. The second major may be in Computer Science. Students must meet all the requirements for admission to and continuation in this or any other limited enrolment Major Program. For academic program descriptions and requirements, please refer to the sections of the Calendar related to each discipline. All program registrations must be approved and confirmed each year by the Supervisor of the Co-op Program and the Supervisor of the particular program(s). Students are individually responsible for ensuring that they have correctly completed all program and degree requirements for graduation.

Program Admission
Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.
Current U of T Scarborough students: Application procedures can be found at the Registrar’s Office website at: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are:

1. Physics & Astrophysics (Major): 4.0 full credits including MATA30H3, [MATA36H3 or MATA37H3], MATA23H3, PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5
2. Biochemistry (Major): 4.0 full credits including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3 plus a cumulative GPA of at least 2.5
3. Biological Chemistry (Specialist): 4.0 full credits including BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

4. Chemistry (Major): 4.0 full credits including CHMA10H3, CHMA11H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

5. Chemistry (Specialist): 4.0 full credits including CHMA10H3, CHMA11H3, MATA30H3, [MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

6. Environmental Biology (Specialist): 4.5 full credits as follows: BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, EESA01H3, EESA06H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3] & PHYA10H3 plus a cumulative GPA of at least 2.5

7. Environmental Chemistry (Specialist): 4.5 full credits as follows: BIOA01H3, BIOA02H3, CHMA10H3, CHMA11H3, EESA01H3, EESA06H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3] & PHYA10H3 plus a cumulative GPA of at least 2.5

8. Environmental Physics (Specialist): 4.5 full credits as follows: CHMA10H3, CHMA11H3, EESA01H3, EESA06H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3] & PHYA10H3 plus a cumulative GPA of at least 2.5

9. Environmental Science (Major): 4.0 full credits including BIOA01H3, BIOA02H3, EESA06H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

10. Environmental Science (Specialist): 4.0 full credits including CHMA10H3, CHMA11H3, EESA01H3, EESA06H3, MATA30H3, [MATA35H3 or MATA36H3 or MATA37H3] & PHYA10H3 plus a cumulative GPA of at least 2.5

11. Mathematics (Major): 4.0 full credits including [CSCA48H3 or PSCB57H3], MATA23H3, MATA30H3 & [MATA36H3 or MATA37H3] plus a cumulative GPA of at least 2.5

12. Mathematics (Specialist): 4.0 full credits including CSCA48H3, MATA23H3, MATA30H3, MATA37H3, PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5 The Computational Physical Sciences stream also requires ASTA01H3, ASTA02H3, PHYA10H3 & PHYA21H3.

13. Physical Sciences (Major): 4.0 full credits as follows: CHMA10H3, CHMA11H3, MATA30H3, [MATA36H3 or MATA37H3], MATA23H3, PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

14. Physical & Mathematical Sciences (Specialist): 4.0 full credits including ASTA01H3, ASTA02H3, MATA30H3, MATA23H3, MATA36H3, [MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

15. Physics & Astrophysics (Specialist): 4.0 full credits including MATA23H3, MATA30H3, [MATA36H3 or MATA37H3], PHYA10H3 & PHYA21H3 plus a cumulative GPA of at least 2.5

16. Quantitative Analysis (Specialist): 4.0 full credits including CSCA08H3, CSCA48H3, CSCA67H3, (CSCA65H3), MATA23H3, MATA30H3 & MATA37H3 plus a cumulative GPA of at least 2.5

17. Statistics (Major): 4.0 full credits including CSCA48H3, MATA23H3, MATA30H3 & MATA37H3 plus a cumulative GPA of at least 2.5

**Work Terms**

To be eligible for their first work term, students must have completed at least 7.0 full credits. Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term. Students will work in areas as closely related as possible to their academic Programs. If a student is taking a double-major Program, and if the second major is in Computer Science or in another Department, the work term will be primarily associated with the primary Physical Sciences major. Students are not permitted to complete more than one summer work term.

**Programs and Courses**

The Programs offered by the Department of Physical and Environmental Sciences emphasize co-ordination among traditional subject areas. The aim is to provide students with an integrated view of science. The Concurrent Teacher Education Program (CTEP) and the Co-operative Programs offered in the Department build on this inter-disciplinary theme. **Note:** Corequisites and prerequisites must be carefully checked; for example, MATB41H3 is a corequisite for PHYB21H3.

The Department of Physical and Environmental Sciences offers interdisciplinary courses under the PSC designation. They are designed for students with a broad interest in Physical Science. Many of the Specialist and the Major Programs offered by the disciplines of the Department of Physical and Environmental Sciences require one or more PSC courses. The Department offers an interdisciplinary Specialist Program in the Physical and Mathematical Sciences. This Program provides an excellent opportunity to combine studies from a number of disciplines.

**SPECIALIST PROGRAM IN NATURAL SCIENCES**

**Supervisor of Studies:** N. Cheredeko (416-287-7226) Email: n.cheredeko@utoronto.ca

This program has been withdrawn from the curriculum. Every effort will be made to ensure that degree students who first enrolled at UTSC prior to the 2010 Summer Session will be able to complete it. Students should refer to the 2009/2010 UTSC Calendar.

**MAJOR PROGRAM IN PHYSICAL SCIENCES**

**Supervisor:** G. Lorincz (416-287-7248) Email: lorincz@utsc.utoronto.ca

See Physics and Astrophysics section of this Calendar.
Physics and Astrophysics

Faculty List
A. Griffin, M.Sc. (British Columbia), Ph.D. (Cornell), Professor Emeritus
A. Jacobs, B.A.Sc., B.Sc. (Waterloo), Ph.D. (Illinois), Professor Emeritus
J.D. King, B.A. (Toronto), Ph.D. (Saskatchewan), Professor Emeritus
P.J. O'Donnell, B.Sc., Ph.D. (Glasgow), Professor Emeritus
J.M. Perz, B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Cantab), Professor Emeritus
P. Artyomowicz, M.Sc. (Warsaw University), Ph.D. (N. Copernicus Astron. Center, Polish Academy of Sciences), Professor
C.C. Dyer, B.Sc. (Bishop's), M.Sc., Ph.D. (Toronto), Professor
J.P. Lowman, B.Sc. (Toronto), M.Sc., Ph.D. (York, Canada), Associate Professor
G. Lorincz, B.Sc., M.Sc. (Toronto), Senior Lecturer
S. Tawfiq, B.Sc., M.Sc. (Al-Mustansiriyah), Ph.D. (Trieste, Italy), Senior Lecturer
J. Bayer Carpintero, B.Sc. (Los Andes, Bogota), M.Sc., Ph.D. (Toronto), Lecturer

Physics is the study of the basic laws that govern how material objects move and influence each other. Astrophysics is the application of the principles of Physics to the study of objects in the universe and their interactions and evolution, and thus covers the study of objects such as planets, stars, galaxies, black holes, and the universe as a whole, known as cosmology. The laws of Physics can accurately describe the effect of a star on the motion of a planet, or of the Earth on the motion of a satellite, the effect of a molecule on a nearby atom, or of an atomic nucleus on an electron. Although Newton's laws of motion adequately describe some of these situations, in most cases it is necessary to apply the more recently discovered refinements of these laws - quantum mechanics.
and Einstein's theories of special and general relativity, together with the understanding of electric and magnetic effects so beautifully synthesized in Maxwell's theory of electromagnetism. From these basic principles many of the properties of gases, liquids, solids, plasmas, nuclear matter, planets, stars, etc, can be related to the interactions among the individual units of which these forms of matter are composed. Physics allows us to describe the properties of light, sound and heat up to the point where these enter our senses, as well as x-ray, radio, cosmic and other radiations of which we are not directly aware. The remarkable properties of some materials under extreme conditions of temperature and pressure, and of other materials when an electric current passes through them, form the basis of a wide range of applications in the technology of our every-day lives, from microwave ovens to cellular telephones and GPS navigation. It is possible to develop, in mathematical language, theories that so accurately describe physical phenomena that they may be used to predict the results of many carefully controlled experiments. The study of physics and astrophysics, therefore, involves both mathematics and the techniques of experimentation.

At the University of Toronto Scarborough, students who are interested in Physics and Astrophysics can take the Specialist Program in Physics and Astrophysics, the Specialist Program in Physical & Mathematical Sciences, the Major Program in Physics and Astrophysics, the Major Program in Physical Sciences, the Specialist Program in Environmental Physics, or the Specialist Program in Computer Science and Physical Sciences (Computer Science and Physics stream).

Notes: PHYA10H3 and PHYA11H3 both require MATA30H3 as a corequisite. Any one of MATA35H3, MATA36H3, or MATA37H3 is a suitable corequisite for PHYA21H3 and PHYA22H3. However, some higher level MAT courses have MATA37H3 as a prerequisite. No Physics and Astrophysics programs require MATA37H3 explicitly, so students should check to see if there is a prerequisite of MATA37H3 for MAT courses required outside the Physics and Astrophysics program requirements. Please note that prerequisites and corequisites for PHY, PSC, and AST courses will be enforced.

Service Learning and Outreach (Previously known as Science Engagement)
For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

SPECIALIST PROGRAM IN ENVIRONMENTAL PHYSICS (SCIENCE)
See the Environmental Science section of this Calendar for program requirements.

SPECIALIST PROGRAM IN PHYSICS AND ASTROPHYSICS (SCIENCE) - formerly Physics and Its Applications (with streams)
Supervisor: J. Lowman (416-208-4880) Email: lowman@utsc.utoronto.ca
Program Requirements: The Program requires 13.0 full credits as follows:

First Year
- PHYA10H3 Introduction to Physics IA
- PHYA21H3 Introduction to Physics IIA
- MATA30H3 Calculus I for Biological and Physical Sciences
- MATA23H3 Linear Algebra I
  [MATA36H3 Calculus II for Physical Sciences
  or
  MATA37H3 Calculus II for Mathematical Sciences]

Second Year
- ASTB23H3 Astrophysics of Stars, Galaxies and the Universe
- PHYB10H3 Intermediate Physics Laboratory I
- PHYB56H3 Introduction to Quantum Physics
- PHYB21H3 Electricity and Magnetism
- PHYB52H3 Thermal Physics
- PHYB54H3 Mechanics: From Oscillations to Chaos
- MATB41H3 Techniques of the Calculus of Several Variables I
- MATB42H3 Techniques of the Calculus of Several Variables II
- MATB44H3 Differential Equations I

Third Year
- PHYC50H3 Electromagnetic Theory
- PHYC56H3 Quantum Mechanics I
- PHYC11H3 Intermediate Physics Laboratory II
- PHYC54H3 Classical Mechanics
- PSCB57H3 Introduction to Scientific Computing
- MATC34H3 Complex Variables
- MATC46H3 Differential Equations II

Fourth Year
Three of:
- ASTC25H3 Astrophysics of Planetary Systems
- PHYD37H3 Introduction to Fluid Mechanics
- PHYD38H3 Introduction to Nonlinear Systems and Chaos
- PHY452H3 Basic Statistical Mechanics
PHY456H3 Quantum Mechanics II
PHY483H Relativity Theory I
PHY484H Relativity Theory II
PHY487H Condensed Matter Physics
PHY489H Introduction to High Energy Physics
PHY491H Current Interpretations of Quantum Mechanics
PHY492H Advanced Atmospheric Physics
PHY493H Geophysical Imaging I
PHY494H Geophysical Imaging II
PHY495H Experimental Global Geophysics
PHY496H Experimental Applied Geophysics
One of:
PHYD01H3 Physics Research Project
PHYD11H3 Computational Physics Project
PHYD72H3 Supervised Reading in Physics
ASTD01H3 Astrophysics Research Project
ASTD02H3 Supervised Reading in Astrophysics
PSCD10H3 Physical Sciences Project
One additional 0.5 credit from a course in AST or PHY at the C-, D-, 300-, or 400-level, or
PSCD02H3 Current Questions in Mathematics and Science

SPECIALIST PROGRAM IN PHYSICAL AND MATHEMATICAL SCIENCES (SCIENCE)
Supervisor: J. Lowman (416-208-4880) Email: lowman@utsc.utoronto.ca
This Program provides a framework of courses in the Physical Sciences based upon a firm Mathematical foundation, relating Astronomy, Chemistry, Computer Science, Physics and Statistics. It prepares students for careers in teaching, industry, and government as well as for further studies at the graduate level.

Total Credits: 15.5

Program Requirements:

First Year:
PHYA10H3 Introduction to Physics IA
PHYA21H3 Introduction to Physics IIA
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
MATA30H3 Calculus I for Biological and Physical Sciences
MATA23H3 Linear Algebra I
[MATA36H3 Calculus II for Physical Sciences
or
MATA37H3 Calculus II for Mathematical Sciences]

Second Year
PHYB10H3 Intermediate Physics Laboratory I
PHYB56H3 Introduction to Quantum Physics
PHYB21H3 Electricity and Magnetism
PHYB52H3 Thermal Physics
MATB24H3 Linear Algebra II
MATB41H3 Techniques of the Calculus of Several Variables I
MATB42H3 Techniques of the Calculus of Several Variables II
MATB44H3 Differential Equations I

Second or Third Year
PHYB54H3 Mechanics: From Oscillations to Chaos
ASTB23H3 Astrophysics of Stars, Galaxies and the Universe
CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
CHMB21H3 Chemical Structure and Spectroscopy
MATB61H3 Linear Programming
PSCB57H3 Introduction to Scientific Computing
CSCB58H3 Computer Organization
STAB52H3 An Introduction to Probability

Third or Fourth Year
A total of 4.0 credits from:
ASTC25H3 Astrophysics of Planetary Systems
MATC34H3 Complex Variables
MATC46H3 Differential Equations II
PHYC50H3 Electromagnetic Theory
PHYC56H3 Quantum Mechanics I
PHYC11H3 Intermediate Physics Laboratory II
PHYC54H3 Classical Mechanics
PHYD37H3 Introduction to Fluid Mechanics
PHYD38H3 Introduction to Nonlinear Systems and Chaos
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCD37H3 Analysis of Numerical Algorithms for Computational Mathematics
PSCD02H3 Current Questions in Mathematics and Science
[PHYD01H3 Physics Research Project or
PHYD11H3 Computational Physics Project or
PHYD72H3 Supervised Reading in Physics or
ASTD01H3 Astrophysics Research Project or
ASTD02H3 Supervised Reading in Astrophysics or
PSCD10H3 Physical Sciences Project]

MAJOR PROGRAM IN PHYSICAL SCIENCES (SCIENCE)
Supervisor: G. Lorincz (416-287-7248) Email: lorincz@utsc.utoronto.ca
The Major Program in Physical Sciences is intended for students desiring a general background in the physical sciences (with
emphasis in the area of astronomy, physics and physical chemistry) but who do not intend to pursue graduate studies.
Parallel major Programs for students more interested in the mathematical sciences or in chemistry are offered in Mathematical
Sciences, in Chemistry, and in Biochemistry.

Program Requirements: The Program requires 8 full credits as follows:

First Year:
PHYA10H3 Introduction to Physics I A
PHYA21H3 Introduction to Physics IIA
CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms
MATA30H3 Calculus I for Biological and Physical Sciences
MATA23H3 Linear Algebra I
[MATA36H3 Calculus II for Physical Sciences
or
MATA37H3 Calculus II for Mathematical Sciences]
Second or Third Year
Five of:
PHYB10H3 Intermediate Physics Laboratory I
PHYB21H3 Electricity and Magnetism
PHYB52H3 Thermal Physics
PHYB54H3 Mechanics: From Oscillations to Chaos
PHYB56H3 Introduction to Quantum Physics
MATB24H3 Linear Algebra II
MATB41H3 Techniques of the Calculus of Several Variables I
MATB42H3 Techniques of the Calculus of Several Variables II
MATB44H3 Differential Equations I
ASTB23H3 Astrophysics of Stars, Galaxies and the Universe
CHMB20H3 Chemical Thermodynamics and Elementary Kinetics
CHMB21H3 Chemical Structure and Spectroscopy
STAB22H3 Statistics I

Third or Fourth Year
Four of:
ASTC25H3 Astrophysics of Planetary Systems
MATC34H3 Complex Variables
MATC46H3 Differential Equations II
PHYC50H3 Electromagnetic Theory
PHYC56H3 Quantum Mechanics I
PHYC11H3 Intermediate Physics Laboratory II
PHYC54H3 Classical Mechanics
PHYD37H3 Introduction to Fluid Mechanics
PHYD38H3 Introduction to Nonlinear Systems and Chaos  
PSCB57H3 Introduction to Scientific Computing  
PSCD02H3 Current Questions in Mathematics and Science  

[PHYD01H3 Physics Research Project or PHYD11H3 Computational Physics Project or PHYD72H3 Supervised Reading in Physics or ASTD01H3 Astrophysics Research Project or ASTD02H3 Supervised Reading in Astrophysics or PSCD10H3 Physical Sciences Project]

MAJOR PROGRAM IN PHYSICS AND ASTROPHYSICS (SCIENCE) - formerly Astrophysics & Physics  
Supervisor: C. C. Dyer (416-287-7206)  
Email: dyer@astro.utoronto.ca

Program Requirements:  
The Program requires 8.5 credits as follows:

First Year  
PHYA10H3 Introduction to Physics IA  
PHYA21H3 Introduction to Physics IIA  
MATA30H3 Calculus I for Biological and Physical Sciences  
MATA23H3 Linear Algebra I  
[MATA36H3 Calculus II for Physical Sciences or MATA37H3 Calculus II for Mathematical Sciences]

Second Year and Later Years  
ASTB23H3 Astrophysics of Stars, Galaxies and the Universe  
MATB41H3 Techniques of the Calculus of Several Variables I  
MATB42H3 Techniques of the Calculus of Several Variables II  
MATB44H3 Differential Equations I  
PHYB10H3 Intermediate Physics Laboratory I

Three of:  
PHYB56H3 Introduction to Quantum Physics  
PHYB21H3 Electricity and Magnetism  
PHYB52H3 Thermal Physics  
PHYB54H3 Mechanics: From Oscillations to Chaos

A total of 2.0 credits from:  
ASTC25H3 Astrophysics of Planetary Systems  
MATC34H3 Complex Variables  
MATC46H3 Differential Equations II  
PHYC50H3 Electromagnetic Theory  
PHYC56H3 Quantum Mechanics I  
PHYC11H3 Intermediate Physics Laboratory II  
PHYC54H3 Classical Mechanics  
PHYD37H3 Introduction to Fluid Mechanics  
PHYD38H3 Nonlinear Systems and Chaos  
PSCB57H3 Introduction to Scientific Computing  
PSCD02H3 Current Questions in Mathematics and Science  

[PHYD01H3 Physics Research Project or PHYD11H3 Computational Physics Project or PHYD72H3 Supervised Reading in Physics or ASTD01H3 Astrophysics Research Project or ASTD02H3 Supervised Reading in Astrophysics or PSCD10H3 Physical Sciences Project]

MINOR PROGRAM IN ASTRONOMY AND ASTROPHYSICS (SCIENCE)  
Supervisor: J. Bayer Carpintero (416-287-7327)  
Email: jbayer@utsc.utoronto.ca

See the Astronomy section of this Calendar.

PHYA10H3 Introduction to Physics IA  
The course is intended for students in physical, environmental and mathematical sciences. The course introduces basic concepts used to describe the physical world with mechanics as the working example. This includes mechanical systems (kinematics and dynamics), energy, momentum, conservation laws, waves and oscillatory motion.  
Prerequisite: Physics 12U - SPH4U (Grade 12 Physics) & Calculus and Vectors (MCV4U) & Advanced Functions (MHF4U)  
Corequisite: MATA30H3 or MATA31H3  

Breadth Requirement: Natural Sciences

PHYA11H3 Introduction to Physics IB  
This first course in Physics at the university level is intended for students enrolled in the Life sciences. It covers fundamental concepts of classical physics and its applications to macroscopic systems in one and three dimensions. It deals with two main themes; which are Particle and Fluid Mechanics and Waves and Oscillations. The approach will be phenomenological with applications related to life and biological sciences.  
Prerequisite: Grade 12 Advanced Functions (MHF4U) and
Grade 12 Calculus and Vectors (MCV4U)
Corequisite: (MATA20H3) or MATA30H3 or MATA31H3
Exclusion: PHYA10H3, PHY131H, PHY135Y, PHY151H, (PHY110Y), (PHY138Y)
Recommended Preparation: Grade 12 Physics (SPH4U)
Breadth Requirement: Natural Sciences

PHYA21H3 Introduction to Physics IIA
This second physics course is intended for students in physical and mathematical sciences programs. Topics include electromagnetism and special relativity. Prerequisite: PHYA10H3, [MATA30H3 or MATA31H3]
Corequisite: MATA35H3 or MATA36H3 or MATA37H3. Note: MATA35H3 does not allow for many future programs in science.
Exclusion: PHYA22H3, (PHY110Y), PHY132H, PHY135Y, (PHY138Y), PHY152H
Breadth Requirement: Natural Sciences

PHYA22H3 Introduction to Physics IIB
The course covers the main concepts of Electricity and Magnetism, Optics, and Atomic and Nuclear Physics. It provides basic knowledge of these topics with particular emphasis on its applications in the life sciences. It also covers some of the applications of modern physics such as atomic physics and nuclear radiation.
Prerequisite: [PHYA10H3 or PHYA11H3 or (PHYA01H3)] and [MATA30H3 or MATA31H3]
Corequisite: (MATA21H3) or MATA35H3 or MATA36H3 or MATA37H3. Note: (MATA21H3) & MATA35H3 do not allow for many future programs in science.
Breadth Requirement: Natural Sciences

PHYB01H3 Modern Physics for Non-Scientists
A conceptual overview of some of the most interesting advances in physics and the intellectual background in which they occurred. The interrelationship of the actual practice of physics and its cultural and intellectual context is emphasized. (Space time; Symmetries; Quantum Worlds; Chaos.)
Prerequisite: 4.0 credits
Enrolment Limit: 50
Breadth Requirement: Natural Sciences

PHYB10H3 Intermediate Physics Laboratory I
Experimental and theoretical study of AC and DC circuits with applications to measurements using transducers and electronic instrumentation. Practical examples are used to illustrate several physical systems.
Prerequisite: PHYA21H3, [MATA36H3 or MATA37H3]
Corequisite: MATB41H3
Exclusion: (PHYB23H3)
Enrolment Limit: 25
Breadth Requirement: Natural Sciences

PHYB21H3 Electricity and Magnetism
A first course at the intermediate level in electricity and magnetism. The course provides an in-depth study of electrostatics and magnetostatics. Topics examined include Coulomb's Law, Gauss's Law, electrostatic energy, conductors, Ampere's Law, magnetostatic energy, Lorentz Force, Faraday's Law and Maxwell's equations.
Prerequisite: PHYA21H3 & MATB41H3
Corequisite: MATB42H3
Exclusion: PHY241H, PHY251H
Breadth Requirement: Natural Sciences

PHYB52H3 Thermal Physics
The quantum statistical basis of macroscopic systems; definition of entropy in terms of the number of accessible states of a many particle system leading to simple expressions for absolute temperature, the canonical distribution, and the laws of thermodynamics. Specific effects of quantum statistics at high densities and low temperatures.
Prerequisite: [PHYA21H3 or PHY132H or (PHY138Y) or PHY152H] and MATB41H3
Corequisite: MATB42H3
Exclusion: PHY252H
Breadth Requirement: Natural Sciences

PHYB54H3 Mechanics: From Oscillations to Chaos
The linear, nonlinear and chaotic behaviour of classical mechanical systems such as oscillators, rotating bodies, and central field systems. The course will develop analytical and numerical tools to solve such systems and determine their basic properties. The course will include mathematical analysis, numerical exercises (Python), and demonstrations of mechanical systems.
Prerequisite: PHYA21H3, MATB41H3, MATB44H3
Corequisite: MATB42H3
Exclusion: PHY254H, (PHYB20H3)
Breadth Requirement: Natural Sciences

PHYB56H3 Introduction to Quantum Physics
The course introduces the basic concepts of Quantum Physics and Quantum Mechanics starting with the experimental basis and the properties of the wave function. Schrödinger's equation will be introduced with some applications in one dimension. Topics include Stern-Gerlach effect; harmonic oscillator; uncertainty principle; interference packets; scattering and tunnelling in one-dimension.
Prerequisite: PHYA21H3, MATA36H3
Corequisite: MATB41H3
Exclusion: PHY256H, (PHYB25H3)
Breadth Requirement: Natural Sciences

PHYC11H3 Intermediate Physics Laboratory II
The main objective of this course is to help students develop skills in experimental physics by introducing them to a range of important measuring techniques and associated physical phenomena. Students will carry on several experiments in Physics and Astrophysics including electricity and magnetism, optics, solid state physics, atomic and nuclear physics.
Prerequisite: PHYB10H3, PHYB21H3, PHYB52H3
Corequisite: PHYB21H3
Exclusion: (PHYB11H3)
Enrolment Limit: 20
Breadth Requirement: Natural Sciences

PHYC50H3 Electromagnetic Theory
Solving Poisson and Laplace equations via methods of images and separation of variables, Multipole expansion for electrostatics, atomic dipoles and polarizability, polarization in dielectrics, Ampere and Biot-Savart laws, Multipole expansion in magnetostatics, magnetic dipoles, magnetization in matter,
Maxwell’s equations in matter.
Prerequisite: PHYB54H3, PHYB21H3, MATA23H3, MATB42H3, MATB44H3
Exclusion: PHY350H
Breadth Requirement: Natural Sciences

PHYC54H3 Classical Mechanics
A course that will concentrate on the study of symmetry and conservation laws, stability and instability, generalized co-ordinates, Hamilton’s principle, Hamilton’s equations, phase space, Liouville’s theorem, canonical transformations, Poisson brackets, Noether’s theorem.
Prerequisite: PHYB54H3, MATB44H3
Exclusion: PHY350H
Breadth Requirement: Natural Sciences

PHYC56H3 Quantum Mechanics I
The course builds on the basic concepts of quantum theory students learned in PHYB56H3. Topics include the general structure of wave mechanics; eigenfunctions and eigenvalues; operators; orbital angular momentum; spherical harmonics; central potential; separation of variables; hydrogen atom; Dirac notation; operator methods; harmonic oscillator and spin.
Prerequisite: PHYB56H3, PHYB21H3, MATA23H3, MATB42H3, MATB44H3
Exclusion: PHY350H
Breadth Requirement: Natural Sciences

PHYD01H3 Physics Research Project
Introduces students to current research in physics under the supervision of a professorial faculty member. Students undertake an independent project involving theoretical or experimental Physics. Evaluation is by the supervising faculty member in consultation with course supervisor. Students must obtain consent of the course supervisor to enrol in this course.
Prerequisite: 14.0 credits, cumulative GPA of at least 2.5, and permission from the coordinator.
Exclusion: PHY478H
Breadth Requirement: Natural Sciences

PHYD11H3 Computational Physics Project
Introduces students to current research topics in computational physics under supervision of a professorial faculty member. Students undertake an independent project involving computational Physics. Evaluation by the supervising faculty member in consultation with the course supervisor. Students must obtain the consent of the course supervisor to enrol in this course.
Corequisite: 14.0 credits, cumulative GPA of at least 2.5, and permission from the coordinator.
Exclusion: PHY478H
Breadth Requirement: Natural Sciences

PHYD37H3 Introduction to Fluid Mechanics
Description and understanding of the dynamics of fluid systems. Topics covered include the idea of continuum, total derivative, equations for mass and energy conservation, Navier-Stokes equations; introduces tensor notation; stream function, streamlines, trajectories, rate of strain, vorticity; viscous fluids, non-Newtonian rheologies; Bernoulli's equation, channel flow, turbulence, Reynolds number.
Prerequisite: PHYC54H3
Exclusion: PHY454H
Breadth Requirement: Natural Sciences

PHYD38H3 Nonlinear Systems and Chaos
The theory of nonlinear dynamical systems with applications to many areas of physics and astronomy. Topics include stability, bifurcations, chaos, universality, maps, strange attractors and fractals. Geometric, analytical and computational methods will be developed.
Prerequisite: PHYC54H3
Exclusion: PHY460H
Breadth Requirement: Natural Sciences

PHYD72H3 Supervised Reading in Physics
An individual study program chosen by the student with the advice of, and under the direction of a faculty member. A student may take advantage of this course either to specialize further in a field of interest or to explore interdisciplinary fields not available in the regular syllabus.
Prerequisite: 14.0 credits, cumulative GPA of at least 2.5, and permission from the coordinator.
Exclusion: PHY372H, PHY472H
Breadth Requirement: Natural Sciences

Political Science
Faculty List
E.G. Andrew, B.A. (British Columbia), Ph.D. (London), Professor Emeritus
S.J. Colman, M.A. (Oxon.), Professor Emeritus
A. Rubinoff, A.B. (Allegheny), M.A., Ph.D. (Chicago), Professor Emeritus
G.S. Skogstad, B.A., M.A. (Alberta), Ph.D. (British Columbia), Professor
S. Solomon, B.A. (McGill), M.A., Ph.D. (Columbia), Professor Emerita
J. Teichman, B.A., M.A., Ph.D. (Toronto), Professor
M. Hoffmann, B.S. (Michigan Technological University), Ph.D. (George Washington University), Associate Professor
P. Kingston, B.A. (Toronto), M.A. (London), D.Phil. (Oxford), Associate Professor
M.L. Kohn, B.A. (Williams College), M.A., Ph.D. (Cornell University), Associate Professor
C. Norrlof, B.A., M.A. (Lund), Ph.D. (Geneva), Associate Professor
L. Way, B.A. (Harvard), M.A., Ph.D. (UC Berkeley), Associate Professor
C. Cochrane, B.A. (St. Thomas), M.A. (McGill), Assistant Professor
A. Ahmad, B.A. (Toronto), M.A. (Toronto), Ph.D. expected 2012 (McGill)
W. Hurst, B.A. (Chicago), M.A. (Chicago), Ph.D. (UC Berkeley), Assistant Professor
D. Lee, B.A. (Columbia), M. Phil (Oxon), M.A. (Princeton), Ph.D. (Princeton), Assistant Professor
Political Science

P. Triadafilopoulos, B.A. (Toronto), M.A., (Brock), Ph.D. (New School NY), Assistant Professor
R. Hurl, B.A. (Toronto), M.A., Ph.D. (Cornell), Lecturer
R. Levine, B.A. (Rochester), Ph.D. (Duke), Lecturer

Chair: TBA Email: socscichair@utsc.utoronto.ca
Undergraduate Counsellor: J. Roopnarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

Political Science is the study of enduring issues of power and authority, citizenship and governance, justice and legitimacy, and patterns of conflict and cooperation that arise around these issues from ancient to modern times. The field of Political Science is divided into the following sub-fields: Canadian Politics, Comparative Politics (Developing and Developed Countries), International Relations and Political Theory. In the area of Canadian Politics, students learn about the political-institutional foundations, political processes and public policies in Canada. Courses in comparative politics deal with the problems of political change and development in areas such as Asia, Europe, Latin America, and the Middle East. Political participation and mobilization, transitions to democracy and ethnic and religious conflict are some of the themes dealt with in comparative politics courses. International relations is devoted to studying the foreign policies of particular nation-states and the patterns of conflict and cooperation among states. Political theory explores the ideas, such as justice and legitimacy, that are fundamental to political thought and practice, giving special attention to reading and interpreting the classic expositions of politics from ancient Greek philosophers to post-modern social theorists.

Guidelines for 1st year course selection
Students who intend to complete the Political Science or Public Policy programs should include the following in their 1st year course selection: Political Science: One full credit at the A-level in Political Science.
Public Policy: SOCA01H3, SOCA02H3 & one of the Computer Science courses listed in Requirement 1 of the program.

SPECIALIST PROGRAM IN POLITICAL SCIENCE (ARTS)

Program Requirements
Students must complete at least 12.0 full credits in Political Science including:
1. 1.0 full credit from among the A-level political science courses (no more than 1.0 full credit at the A-level may be counted towards the program requirements).
2. POLB70H3 Classic Texts in Political Theory I
   and
   POLB71H3 Classic Texts in Political Theory II
3. POLB50H3 Canada’s Political Institutions
   and
   POLB52H3 Canadian Politics: Connecting Citizens and Governments
4. At least four of the following (2.0 full credits):
   POLB80H3 Introduction to International Relations
   POLB81H3 Global Issues and Governance
   POLB90H3 Comparative Development in International Perspective
   POLB91H3 Comparative Development in Political Perspective
   POLB92H3 Comparative Politics: Revolution, Democracy and Authoritarianism in Modern Europe
   POLB93H3 Comparative Politics: Ethnic Conflict and Democratization in Europe After the Cold War
5. POLC78H3 Political Analysis I or POLB11H3 Statistics for Political Science and Public Policy
6. 6.5 full credits in political science at the C- and/or D-level, of which at least 1.0 must be at the D-level

MAJOR PROGRAM IN POLITICAL SCIENCE (ARTS)

Program Requirements
Students must complete at least seven full credits in Political Science as follows:
1. One full credit from among the A-level political science offerings (no more than one full credit at the A-level may be counted towards the program requirements).
2. POLB70H3 Classic Texts in Political Theory I
   and
   POLB71H3 Classic Texts in Political Theory II
3. POLB50H3 Canada’s Political Institutions
   and
   POLB52H3 Canadian Politics: Connecting Citizens and Governments
4. At least four of the following (two full credits):
   POLB80H3 Introduction to International Relations
   POLB81H3 Global Issues and Governance
   POLB90H3 Comparative Development in International Perspective
   POLB91H3 Comparative Development in Political Perspective
   POLB92H3 Comparative Politics: Revolution, Democracy and Authoritarianism in Modern Europe
   POLB93H3 Comparative Politics: Ethnic Conflict and Democratization in Europe After the Cold War
5. Two full credits in political science at the C- and/or D-level
MINOR PROGRAM IN POLITICAL SCIENCE (ARTS)

Program Requirements
The Program requires the completion of at least four full credits above the A-level in Political Science. At least two of these must be at the C- or D-level. There are two options: either the four full credits must be taken from any one of the fields listed below (e.g. Canadian Government); or two credits must be taken from each of any two of these fields (e.g. two credits in International Relations, two credits in Comparative Politics).

b. Political Theory: POLB70H3, POLB71H3, POLC73H3, POLC74H3, POLC78H3
e. Public Policy: POLC53H3, POLC65H3, POLC66H3, POLC67H3, POLC93H3, POLD64H3

MAJOR PROGRAM IN PUBLIC POLICY (ARTS)

The Major Program in Public Policy equips students with the analytical and methodological skills to secure employment as policy analysts in government, business, and non-governmental sectors, or to continue to graduate training in public policy.

The Program is cross-disciplinary; public policy analysis is the exercise of applying the theoretical frameworks and positivist and interpretive methodologies of the social sciences and humanities to understand the development, implementation, and evaluation of public policy. It requires the ability to think clearly and critically, to design and execute research projects, to analyze both quantitative and qualitative data, and to write clearly. It also requires an understanding of the context, institutions, and processes of policy-making and implementation, as well as concepts and criteria for policy evaluation.

Program Requirements
Students must pay careful attention to the prerequisites for higher level courses.

Course requirements:
Students must complete 8.0 full credits as follows:

1. 1.0 full credits at the A- or B-level in Anthropology, City Studies, Geography, Health Studies, IDS, or Sociology. At least 0.5 credits in A-level Political Science are recommended.

We also recommend interested students to take introductory courses in departments like City Studies, Economics, Environmental Science, Health Studies, and IDS that may reflect their particular substantive interests.

2. Canadian Politics (1.5 credits)
a. POLB50H3 Canada’s Political Institutions and POLB52H3 Canadian Politics: Connecting Citizens and Governments
b. One C- or D-level course in Canadian Politics

3. Fundamentals of Public Policy (1.0 credits)
a. POLC66H3
b. POLC67H3

4. Economics for Public Policy (1.5 credits)
a. Introduction to Micro- and Macroeconomics [[ECMA01H3 & ECMA05H3] or [ECMA04H3 & ECMA06H3]]
b. ECMB35H3 Public Decision Making or ECMB36H3 Economic Aspects of Public Policy (Cost Benefit Analysis)

5. Research Methods (1.0 credits with at least 0.5 credits in quantitative methods)
Quantitative Methods courses include:
- ANTC35H3 Quantitative Methods in Anthropology
- ECMB11H3 Quantitative Methods in Economics I
- GGRA30H3 Geographic Information Systems
- POLB11H3 Statistics for Public Policy
- PSYB07H3 Data Analysis in Psychology
- SOCB06H3 Social Statistics or STAB22H3 Statistics I
6. Applications of Public Policy (2.0 credits) from the list of relevant Public Policy or other courses with the approval of the supervisor of studies. Of these, 1.0 credits must be from the C or D level courses in Political Science.

*Many of these course have prerequisites, please plan accordingly. In addition, we recommend taking methods courses from within your disciplinary major program.

**MAJOR (CO-OPERATIVE) PROGRAM IN PUBLIC POLICY (ARTS)**

*Co-op Contact: askcoop@utsc.utoronto.ca*

The Co-operative Program in Public Policy is a work-study program which combines academic studies in various disciplines with work terms in public enterprises, the private sector, and non-governmental organizations. Two work terms, each of four months duration, must be completed along with the academic program. An optional, third work term may be completed with the permission of the Co-op Coordinator.

The program equips students with the analytical and methodological skills to secure employment as policy analysts in government, business, and the non-governmental sectors, or to continue to graduate training in public policy. The Program is cross-disciplinary; public policy analysis is the exercise of applying the theoretical frameworks and the positivist and interpretive methodologies of the social sciences and humanities to understand the development, implementation, and evaluation of public policy. It requires the ability to think clearly and critically, to design and execute research projects, to analyze both quantitative and qualitative data, and to write clearly. It also requires an understanding of the context, institutions, and processes of policy-making and implementation, as well as concepts and criteria for policy evaluation.

The Co-operative Program in Public Policy is designed to be completed in conjunction with a Major or Specialist Program in another discipline and may only be taken as part of a twenty course honours degree.

For information on fees, work terms and standing in the Program, please see the Social Sciences and Humanities Co-operative section of this Calendar.

**Program Admission**

*Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Social Sciences and Humanities Co-operative Programs section in this Calendar.*

*Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits plus a cumulative GPA of at least 2.5.*

**Program Requirements**

**Work Placement**

To be eligible for the first work term, students must have completed at least 10 credits, including 5.0 credits as a University of Toronto Scarborough student including POLB50H3 (Canada’s Political Institutions), POLB52H3 (Canadian Politics: Connecting Citizens and Governments), and 0.5 credit of Research Methods. Prior to their first work, students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations.

**POLA11H3 Labels, Attachments and Identities: From Apple to ‘Zed’**

Working with faculty, students will design an original survey of the public to measure opinions towards consumer brands, political parties, and personal identities. This survey will bridge the boundaries between marketing and political science, to find commonalities and reveal distinctions between consumer attitudes and political opinions.

*Breadth Requirement: Social & Behavioural Sciences*

**POLA51H3 Critical Issues of Canadian Democracy**

This course examines some issues critical to the well being of Canadian democracy. The issues may change from year to year but will normally include citizen participation, ethical conduct in political life, national unity, and North American regionalism.

*Breadth Requirement: Social & Behavioural Sciences*

**POLA70H3 Politics in Literature**

This course is an introduction to political, social and economic themes arising from imaginative literature. Authors and topics covered will vary from year to year.

*Breadth Requirement: Social & Behavioural Sciences*

**POLA80H3 Cultures of Conflict: Politics, Society and War Since 1812**

This course examines political and social attitudes towards war, and their underlying causes, during the 19th and 20th Centuries, as portrayed in film, literature, and historical writing. Wars examined include the War of 1812, World Wars I and II, and the Vietnam War.

*Breadth Requirement: Social & Behavioural Sciences*

**POLA81H3 Leaving Home: Politics and Emigration**

This course provides a study of the causes and patterns of emigration in the twentieth century. The course examines the variety of political factors (war and revolution, ethnic / racial discrimination, poverty, dilemmas of conscience) that triggered emigration in the twentieth century. Sources include political and historical works, novels and films.

*Breadth Requirement: Social & Behavioural Sciences*
POLA83H3 Exploring Globalization

This course introduces students to a series of issues in global politics and their consequences for Canadian citizens, including the globalizing economy, terrorism, and environmental degradation. The course probes how these major issues are beginning to change the landscape of world politics and present challenges to political authority and collective identity.
Exclusion: (POL100Y), (POL102Y)
Breadth Requirement: Social & Behavioural Sciences

POLA84H3 Globalization and Governance

This course turns to questions of governance in the context of an increasingly globalized world. The course examines the legitimacy and accountability of international organizations, such as the World Trade Organization, and focuses on the rise of new forms of political activism, such as citizen groups and NGOs.
Exclusion: (POL100Y), (POL102Y)
Breadth Requirement: Social & Behavioural Sciences

POLA90H3 Politics, Corruption and Violence

This course uses basic tools in comparative political analysis to examine the origins, dynamics and relationship between corruption and violence in less developed countries. Discussion will be placed in the context of recent developments in the global economy and of their political and social consequences within a variety of country case studies. The course will conclude with some reflections on non-violent alternatives to political action.
Breadth Requirement: Social & Behavioural Sciences

POLB11H3 Statistics for Politics and Public Policy

This course introduces fundamentals of data analysis for political science and public policy. Students will complete multiple computer-based exercises using statistical techniques commonly employed by political scientists to study public opinion and government policies. No prior knowledge of university-level math is required, as the emphasis of the course will be on the application and interpretation of the data. Students will have a choice of writing a final paper or a final term test. The final paper will require students to produce an original piece of research using quantitative methods.
Exclusion: ECMB12H3, PSYB07H3, STAB22H3
Breadth Requirement: Quantitative Reasoning

POLB50H3 Canada's Political Institutions

This course examines the institutional foundations of Canadian government. The constitution, the executive, the Parliament, the public service, the federal system, the Charter of Rights and Freedoms, and the courts are discussed, with emphasis on their role in democratic and responsible government.
Prerequisite: Any 4.0 credits
Exclusion: (POL100Y), (POL102Y), POL214Y
Breadth Requirement: Social & Behavioural Sciences

POLB52H3 Canadian Politics: Connecting Citizens and Governments

This course examines the participatory vehicles and processes through which Canadian citizens seek to render their government responsive and responsible. Political parties, the electoral system, interest groups, new social movements, Quebec nationalism, and aboriginal self-determination are given attention.
Prerequisite: POLB50H3
Note: It is strongly recommended that students take POLB50H3 and POLB52H3 in consecutive sessions.
Exclusion: (POL100Y), (POL102Y), POL214Y
Breadth Requirement: Social & Behavioural Sciences

POLB70H3 Classic Texts in Political Theory I

This course examines central political texts from the ancient Greeks to the Renaissance, including Plato's Republic, Aristotle's Politics, Machiavelli's The Prince.
Prerequisite: Any 4.0 credits
Exclusion: POL200Y
Breadth Requirement: History, Philosophy & Cultural Studies

POLB71H3 Classic Texts in Political Theory II

This course examines texts from the Glorious Revolution to the French Revolution, including Hobbes' Leviathan, Locke's Second Treatise, Rousseau's Social Contract and the Discourse on Inequality.
Prerequisite: POLB70H3 Note: It is strongly recommended that students take POLB70H3 and POLB71H3 in consecutive sessions.
Exclusion: POL200Y
Breadth Requirement: History, Philosophy & Cultural Studies

POLB80H3 Introduction to International Relations

This course examines different approaches to international relations, the characteristics of the international system, and the factors that motivate foreign policies.
Prerequisite: Any 4.0 credits Exclusion: POL208Y
Breadth Requirement: Social & Behavioural Sciences

POLB81H3 Global Issues and Governance

This course examines the historical and current impact of the international order on the development prospects and politics of less developed countries. Topics include colonial conquest, multi-national investment, the debt crisis and globalization. The course focuses on the effects of these international factors on domestic power structures, the urban and rural poor, and the environment.
Prerequisite: Any 4.0 credits
Exclusion: POL208Y
Breadth Requirement: Social & Behavioural Sciences

POLB90H3 Comparative Development in International Perspective

This course examines the historical and current impact of the international order on the development prospects and politics of less developed countries. Topics include colonial conquest, multi-national investment, the debt crisis and globalization. The course focuses on the effects of these international factors on domestic power structures, the urban and rural poor, and the environment.
Prerequisite: Any 4.0 credits
Exclusion: POL201Y
Breadth Requirement: Social & Behavioural Sciences

POLB91H3 Comparative Development in Political Perspective

This course examines the role of politics and the state in the processes of development in less developed countries. Topics include the role of the military and bureaucracy, the relationship between the state and the economy, and the role of religion and
Democratization in Europe After the Cold War
This course explores the origins of modern political institutions in Europe through an examination of revolutions, democracy, and authoritarianism in Europe since 1789. Specific case studies include the French Revolution, democratization in Britain and Spain, the Russian Revolution and the rise of the Nazis in Germany.
Prerequisite: POLB90H3

Note: It is strongly recommended that students take POLB90H3 and POLB91H3 in consecutive sessions.
Exclusion: POLB92H3
Breadth Requirement: Social & Behavioural Sciences

POLB92H3 Comparative Politics: Revolution, Democracy and Authoritarianism in Modern Europe
This course explores the origins of modern political institutions in Europe through an examination of revolutions, democracy, and authoritarianism in Europe since 1789. Specific case studies include the French Revolution, democratization in Britain and Spain, the Russian Revolution and the rise of the Nazis in Germany.
Prerequisite: POLB90H3

Note: It is strongly recommended that students take POLB90H3 and POLB91H3 in consecutive sessions.
Breadth Requirement: Social & Behavioural Sciences

POLB93H3 Comparative Politics: Ethnic Conflict and Democratization in Europe After the Cold War
This course explores post-Cold War politics in Europe through an examination of democratization and ethnic conflict since 1989 - focusing in particular on the role of the European Union in shaping events in Eastern Europe. The first part of the course will cover theories of democratization, ethnic conflict as well as the rise of the European Union while the second part of the course focuses on specific cases.
Prerequisite: POLB92H3

Note: It is strongly recommended that students take POLB92H3 and POLB93H3 in consecutive sessions.
Breadth Requirement: Social & Behavioural Sciences

POLC16H3 Chinese Politics
This course will cover Chinese politics and society from 1949 to the present, with an emphasis on the period since 1989. A central theme will be the tensions, challenges and debates that drive decision-making, policy implementation, and social reactions in contemporary China.
Exclusion: JPA331Y, JMC031Y
Recommended Preparation: Some coursework either on comparative politics or some aspect of Chinese history, language, society, or culture.
Breadth Requirement: Social & Behavioural Sciences

POLC19H3 Politics of the 'Malay' World
Indonesia, Malaysia and Singapore are radically different countries, but can be referred to as the „Malay World“ by virtue of their common linguistic heritage. This course provides an introduction to the politics and society of these three countries from colonization to the present, focusing on the period since 1945.
Recommended Preparation: Some coursework either on comparative politics or Asian Studies.
Breadth Requirement: Social & Behavioural Sciences

POLC37H3 Global Justice
This course examines theoretical debates about the extent of moral and political obligations to non-citizens. Topics include human rights, immigration, global poverty, development, terrorism, and just war.
Prerequisite: [POLB70H3 and POLB71H3] or PHLA11H3 or IDSB06H3
Exclusion: PHLB08H3
Breadth Requirement: History, Philosophy & Cultural Studies

POLC40H3 Current Topics in Politics
Topics will vary depending on the instructor.
Prerequisite: One B-level full credit in Political Science
Breadth Requirement: Social & Behavioural Sciences

POLC42H3 Topics in Comparative Politics
Topics will vary depending on the regional interests and expertise of the Instructor.
Prerequisite: One B-level full credit in Political Science
Breadth Requirement: Social & Behavioural Sciences

POLC53H3 Canadian Environmental Politics
This course examines the ideas and success of the environmental movement in Canada. The course focuses on how environmental policy in Canada is shaped by the ideas of environmentalists, economic and political interests, public opinion, and Canada's political-institutional framework.
Combined lecture-seminar format.
Prerequisite: POLA51H3 or POLB50H3
Breadth Requirement: Social & Behavioural Sciences

POLC54H3 Intergovernmental Relations in Canada
This course examines relations between provincial and federal governments in Canada, and how they have been shaped by the nature of Canada's society and economy, judicial review, constitutional amendment, and regionalisation and globalization. The legitimacy and performance of the federal system are appraised. Lecture-seminar format.
Prerequisite: POLA51H3 or POLB50H3 or equivalent
Exclusion: POL316Y
Breadth Requirement: Social & Behavioural Sciences

POLC55H3 Intergovernmental Relations and Public Policy
This course examines intergovernmental relations in various areas of public policy and their effects on policy outcomes. It evaluates how federalism affects the capacity of Canadians to secure desirable social, economic, environmental and trade policies. Lecture-seminar format.
Prerequisite: [POLB50H3 or equivalent] & POLC54H3
Exclusion: POL316Y
Breadth Requirement: Social & Behavioural Sciences

POLC65H3 Political Strategy
This course focuses on analyzing and influencing individual and collective choices of political actors to understand effective strategies for bringing about policy changes. We will draw on the psychology of persuasion and decision-making, as well as literature on political decision-making and institutions, emphasizing contemporary issues. During election years in North America, special attention will be paid to campaign strategy. There may be a service-learning requirement.
Prerequisite: At least 4.0 credits.
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

POLC66H3 Public Policy Making
This course provides a study of current theories of public policy-making and the processes that are involved in making public policies. Policy processes of agenda setting, choosing governing instruments, making public decisions, and implementing and evaluating governmental programs are examined using specific cases of public policy-making in
POLC67H3 Public Policy in Canada
This course is a survey of contemporary patterns of public policy in Canada. Selected policy studies including managing the economy from post-war stabilization policies to the rise of global capitalism, developments in the Canadian welfare state and approaches to external relations and national security in the new international order.
Prerequisite: POLB50H3 and POLB52H3
Breadth Requirement: Social & Behavioural Sciences

POLC68H3 The Constitution of Canada and the Charter of Rights and Freedoms
This course will investigate the development of Canadian constitutional law under the Constitution Act of 1982 and the Charter of Rights and Freedoms. Specific topics include criminal rights, freedom of expression, freedom of religion, equality rights, and aboriginal rights.
Prerequisite: POLB50H3 and POLB52H3
Exclusion: POL337Y
Enrolment Limits: 50
Breadth Requirement: Social & Behavioural Sciences

POLC73H3 Modern Political Theory I
This course is a study of the major political philosophers of the nineteenth century, including Hegel, Marx, J.S. Mill and Nietzsche.
Prerequisite: [POLB70H3 & POLB71H3] or equivalent
Exclusion: POL320Y
Breadth Requirement: History, Philosophy & Cultural Studies

POLC74H3 Contemporary Political Thought
This course is a study of the major political philosophers of the twentieth century. The theorists covered will vary from year to year.
Prerequisite: POLB70H3 & POLB71H3
Exclusion: POL320Y
Breadth Requirement: History, Philosophy & Cultural Studies

POLC78H3 Political Analysis I
This course examines the principles of research design and methods of analysis employed by researchers in political science. Students will learn to distinguish between adequate and inadequate use of evidence and between warranted and unwarranted conclusions.
Prerequisite: 1.0 credits in Political Science
Breadth Requirement: Social & Behavioural Sciences

POLC82H3 The Formulation of American Foreign Policy
This course examines the process by which American foreign policy is formulated.
Prerequisite: One full credit from: POLB80H3, POLB81H3, POLC92H3, POLC93H3
Exclusion: POL326Y
Breadth Requirement: Social & Behavioural Sciences

POLC83H3 The Application of American Foreign Policy
This course examines the foreign policy of the United States by analyzing its context and application to a number of specific regions and problems in the world.
Prerequisite: One full credit from: POLB80H3, POLB81H3, POLC92H3, POLC93H3
Exclusion: POL326Y
Breadth Requirement: Social & Behavioural Sciences

POLC84H3 Canadian Foreign Policy I
This course introduces Canadian foreign policy since 1945.
Prerequisite: POLB50H3 & POLB52H3 & POLB80H3 & POLB81H3
Exclusion: POL312Y
Breadth Requirement: Social & Behavioural Sciences

POLC85H3 Canadian Foreign Policy II
This course considers the issues and influences which have determined Canadian foreign policy.
Prerequisite: POLC84H3
Exclusion: POL312Y
Breadth Requirement: Social & Behavioural Sciences

This course examines the rise and the collapse of the first Communist state. Topics include the Stalinist dictatorship and de-Stalinization, the planned economy and the black market, ethnic politics and dissent. Particular attention is paid to the attempt to reform communism before 1991.
Prerequisite: One B-level full credit in Political Science
Exclusion: (POL204Y)
Breadth Requirement: Social & Behavioural Sciences

POLC87H3 International Cooperation and Institutions
This course explores the possibilities and limits for international cooperation in different areas and an examination of how institutions and the distribution of power shape bargained outcomes.
Prerequisite: POLB80H3 & POLB81H3
Breadth Requirement: Social & Behavioural Sciences

POLC88H3 The New International Agenda
Traditional International Relations Theory has concentrated on relations between states, either failing to discuss, or missing the complexities of important issues such as terrorism, the role of women, proliferation, globalization of the world economy, and many others. This course serves as an introduction to these issues - and how international relations theory is adapting in order to cover them.
Prerequisite: [POLB80H3 & POLB81H3] or equivalent
Breadth Requirement: Social & Behavioural Sciences

POLC89H3 Politics and Government in Post-Communist Russia
The course examines the attempt to create democracy and a market economy in post-communist Russia. Topics include federalism and regional politics, organized crime, the decline of the welfare state, and Russia's place in the world.
Prerequisite: One B-level full credit in Political Science
Exclusion: (POL204Y)
Breadth Requirement: Social & Behavioural Sciences

POLC90H3 Development Studies: Political and Historical Perspectives
This course provides students with a more advanced examination of issues in development studies, including some of the mainstream theoretical approaches to development studies and a critical examination of development practice in historical
PLOC91H3 Latin America: Dictatorship and Democracy
This course explores the origins of Latin America's cycles of brutal dictatorship and democratic rule. It examines critically the assumption that Latin American countries have made the transition to democratic government.
Prerequisite: [POLB90H3 & POLB91H3] or equivalent
Exclusion: POL305Y
Breadth Requirement: Social & Behavioural Sciences

PLOC92H3 The American Political Process
This course analyses the American federal system and the institutions and processes of government in the United States.
Prerequisite: One full credit in Political Science at the B-level
Exclusion: POL203Y
Breadth Requirement: Social & Behavioural Sciences

PLOC93H3 Public Policies in the United States
This course focuses on selected policy issues in the United States.
Prerequisite: One full credit in Political Science at the B-level
Exclusion: POL203Y
Breadth Requirement: Social & Behavioural Sciences

PLOC94H3 Globalization, Gender and Development
This course explores the gendered impact of economic globalization and the various forms of resistance and mobilization that women of the global south have engaged in their efforts to cope with that impact. The course pays particular attention to regional contextual differences (Latin America, Africa, Asia and the Middle East) and to the perspectives of global south women, both academic and activist, on major development issues.
Prerequisite: POLB90H3
Breadth Requirement: Social & Behavioural Sciences

PLOC95H3 International Political Economy of Trade
This course examines why countries trade and how international exchange is affected by domestic and international structures. Grand theories of international political economy are surveyed for this purpose, and recent perspectives and issues related to the organization of world trade are reviewed.
Prerequisite: [POLB80H3 & POLB81H3] or equivalent; familiarity with basic economic concepts is recommended
Breadth Requirement: Social & Behavioural Sciences

PLOC96H3 State Formation and Authoritarianism in the Middle East
This course examines the origins of, and political dynamics within, states in the contemporary Middle East. The first part of the course analyses states and state formation in historical perspective - examining the legacies of the late Ottoman and, in particular, the colonial period, the rise of monarchal states, the emergence of various forms of "ethnic" and/or "quasi" democracies, the onset of "revolutions from above", and the consolidation of populist authoritarian states. The second part of the course examines the resilience of the predominantly authoritarian state system in the wake of socio-economic and political reform processes.
Prerequisite: POLB90H3 & POLB91H3
Breadth Requirement: Social & Behavioural Sciences

PLOC97H3 Protest Politics in the Middle East
This course examines various forms of protest politics in the contemporary Middle East. The course begins by introducing important theoretical debates concerning collective action in the region - focusing on such concepts as citizenship, the public sphere, civil society, and social movements. The second part of the course examines case studies of social action - examining the roles played by crucial actors such as labour, the rising Islamist middle classes/bourgeoisie, the region's various ethnic and religious minority groups, and women who are entering into the public sphere in unprecedented numbers. The course concludes by examining various forms of collective and non-collective action in the region from Islamist social movements to everyday forms of resistance.
Prerequisite: POLB90H3 & POLB91H3
Breadth Requirement: Social & Behavioural Sciences

PLOC98H3 International Political Economy of Finance
This course explains why financial markets exist, and their evolution, by looking at the agents, actors and institutions which generate demand for them. We also consider the consequences of increasingly integrated markets, the causes of systemic financial crises, as well as the implications and feasibility of regulation.
Prerequisite: POLB80H3 & POLB81H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

PLOC99H3 Latin America: The Politics of the Dispossessed
This course explores the way the poor and oppressed have organized and fought for their rights. Special attention is given to the way in which globalization has affected popular organizing, including its impact on insurgent movements such as the Zapatistas.
Prerequisite: [POLB90H3 & POLB91H3] or equivalent
Exclusion: POL305Y
Breadth Requirement: Social & Behavioural Sciences

POLD01H3 Research Seminar in Political Science
This course provides an opportunity to design and carry out individual or small-group research on a political topic. After class readings on the topic under study, research methods and design, and research ethics, students enter "the field" in Toronto. The seminar provides a series of opportunities to present and discuss their unfolding research.
Prerequisite: 2.0 credits in Political Science and a cumulative GPA of at least 3.2.
Corequisite: POLD78H3 is recommended but not required.
Exclusion: POLD01H3 may not be taken after or concurrently with POLD78H3.
Enrolment Limits: 15

POLD02Y3 Research Seminar in International Relations
This course provides an opportunity to carry out individual research on an international relations topic. After class readings on the topic under study, research methods and design, and research ethics, students will propose and carry out the research. The seminar provides opportunities to present and discuss their unfolding research.
Prerequisite: POLB80H3 & POLB81H3
Enrolment Limits: 15. Restricted to students in the Specialist Program in Political Science.

POLD41H3 Advanced Topics in Politics
Topics will vary depending on the instructor.
Prerequisite: One B-level full credit in Political Science
Exclusion: (POLC41H3)
Enrolment Limits: 25

POLD45H3 Constitutionalism
This course studies the theory of constitutionalism through a detailed study of its major idioms such as the rule of law, the separation of powers, sovereignty, rights, and limited government.
Prerequisite: POLB70H3 and POLB71H3, plus one non-governmental theory political science course.
Enrolment Limits: 25
Breadth Requirement: History, Philosophy & Cultural Studies

POLD50H3 Political Interests, Political Identity, and Public Policy
This course examines the interrelationship between organized interests, social movements and the state in the formulation and implementation of public policy in Canada and selected other countries.
Prerequisite: POLA51H3 or [POLB50H3 & POLB52H3]
Breadth Requirement: Social & Behavioural Sciences

POLD51H3 Topics in Canadian and Comparative Politics
This seminar course explores selected issues of Canadian politics from a comparative perspective. The topics in this course vary depending on the instructor.
Prerequisite: POLB50H3 & POLB52H3
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

POLD52H3 Immigration and Canadian Political Development
Immigration has played a central role in Canada’s development. This course explores how policies aimed at regulating migration have both reflected and helped construct conceptions of Canadian national identity. We will pay particular attention to the politics of immigration policymaking, focusing on the role of the state and social actors.
Prerequisite: POLB50H3 & POLB52H3
Recommended Preparation: POLC67H3 & SOCC52H3
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

POLD64H3 Comparative Public Policy
This seminar course explores some of the major approaches to the comparative analysis of public policies of industriized countries. The course uses a combination of case studies and theoretical literature to examine selected social and economic public policies and policy making in Europe, Canada, and the United States.
Prerequisite: 1.0 credit at the B- or C-level in comparative or Canadian politics.
Breadth Requirement: Social & Behavioural Sciences

POLD70H3 Topics in Political Theory
This seminar explores the ways in which political theory can deepen our understanding of contemporary political issues. Topics may include the following: cities and citizenship; multiculturalism and religious pluralism; the legacies of colonialism; global justice; democratic theory; the nature of power.
Prerequisite: POLB70H3 & POLB71H3
Recommended Preparation: POLC73H3 or POLC74H3
Enrolment Limits: 25

POLD78H3 Political Analysis II
This seminar course is intended for students interested in deepening their understanding of methodological issues that arise in the study of politics. In addition to class readings, students will write critical reviews of published work and will work to design their own research projects.
Prerequisite: POLC78H3
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

POLD80H3 The End of the Cold War and Its Aftermath
This course explores the end of the Cold War and its impact on political and economic evolution of countries in the developing world. With a focus on the former Soviet Union and Africa, this course will examine the nature and impact of new post Cold War pressures for political and economic change.
Prerequisite: One B- or C-level course in Comparative Politics.
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

POLD87H3 Rational Choice and International Cooperation
This course is an introduction to rational choice theories with applications to the international realm. A main goal is to introduce analytical constructs frequently used in the political science and political economy literature to understand strategic interaction among states.
Prerequisite: POLB80H3 & POLB81H3
Enrolment Limits: 20
Breadth Requirement: Social & Behavioural Sciences

POLD88H3 Exploring the New International Agenda
This course examines in depth the broad set of new issues on the international agenda: terrorism, non-proliferation, human security, women's issues, human rights and others. It emphasizes in-class participation, and student presentations.
Prerequisite: POLC88H3
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

POLD89H3 Global Environmental Politics
Examines the challenges faced by humanity in dealing with global environmental problems and the politics of addressing them. Focuses on both the underlying factors that shape the politics of global environmental problems - such as scientific uncertainty, North-South conflict, and globalization - and explores attempts at the governance of specific environmental issues.
Prerequisite: POLB80H3 & POLB81H3
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences
POLD90H3 Public Policy and Human Development in the Global South

While domestic and international political factors have discouraged pro human development public policies in much of the global south, there have been some important success stories. This course examines the economic and social policies most successful in contributing to human development and explores the reasons behind these rare cases of relatively successful human development.

Prerequisite: A social sciences or humanities course on the global south or on development.

Enrolment Limits: 25

Breadth Requirement: Social & Behavioural Sciences

POLD94H3 Selected Topics on Developing Areas

Topics vary according to instructor.

Prerequisite: A Social Sciences or Humanities course on the Third World or Development.

POLD95H3 Supervised Research

A research project under the supervision of a member of faculty that will result in the completion of a substantial report or paper acceptable as an undergraduate senior thesis.

Students wishing to undertake a supervised research project in the Winter Session must register in POLD95H3 during the Fall Session. It is the student's responsibility to find a faculty member who is willing to supervise the project, and the student must obtain consent from the supervising instructor before registering for this course. During the Fall Session the student must prepare a short research proposal, and both the supervising faculty member and the Supervisor of Studies must approve the research proposal prior to the first day of classes for the Winter Session.

Prerequisite: Permission of the instructor

POLD98H3 Supervised Reading

Advanced reading in special topics. This course is meant only for those students who, having completed the available basic courses in a particular field of Political Science, wish to pursue further intensive study on a relevant topic of special interest. Students are advised that they must obtain consent from the supervising instructor before registering for this course.

Prerequisite: One B-level course in Political Science & permission of the instructor.

Exclusion: POL495Y

Psychology

Faculty List

G.B. Biederman, B.Sc. (CUNY), Ph.D. (NYU), Professor Emeritus
J.E. Foley, B.A., Ph.D. (Sydney), Professor Emerita
B. Forrin, B.A. (Toronto), M.A., Ph.D. (Michigan), Professor Emeritus
A. Kukla, A.B., M.A., Ph.D. (UCLA), Professor Emeritus
N.W. Milgram, B.A. (UCLA), M.A., Ph.D. (McGill), Professor Emeritus
M.C. Smith, B.A. (Toronto), Ph.D. (MIT), Professor Emerita
J.M. Kennedy, B.Sc., M.Sc. (Belfast), Ph.D. (Cornell), University Professor Emeritus
M. Bagby, B.A. (Tennessee), M.A. (Radford), Ph.D., C. Psych (York, Professor
J.N. Bassili, B.A. (McGill), Ph.D. (Cornell), Professor
G.C. Cupchik, B.A. (Michigan), M.A., Ph.D. (Wisconsin), Professor
K.K. Dion, B.A. (Wellesley), Ph.D. (Minnesota), Professor
G.O. Ivy, B.A. (Drew), Ph.D. (California), Professor
S. Joordens, B.A. (New Brunswick), M.A., Ph.D. (Waterloo), Professor
T.L. Petit, B.Sc., M.A. (Louisiana), Ph.D. (Florida), Professor
M.A. Schmuckler, B.A. (SUNY-Binghamton), Ph.D. (Cornell), Professor
G.S. Cree, B.A., M.A., Ph.D. (Western), Associate Professor
S. Erb, B.Sc. (Wilfrid Laurier), M.A., Ph.D. (Concordia, Associate Professor
M.A. Fournier, B.A., Ph.D. (McGill), Associate Professor
D. W. Haley, B.A. (Annapolis), M.A. (San Francisco), Ph.D. (Albuquerque), Associate Professor
M. Inzlicht, B.Sc. (McGill), M.Sc., Ph.D. (Brown), Associate Professor
M. Niemeier, M.A. (Hamburg), Ph.D. (Tübingen), Associate Professor
R. Smyth, B.A. (Carleton), M.Sc. (Alberta), Ph.D. (Alberta), Associate Professor
K.K. Zakzanis, B.A., M.A., Ph.D., C.Psych. (York), Associate Professor
R. Ito, B.A. (Oxford), Ph.D. (Cambridge), Assistant Professor
A.C.H. Lee, B.A. (Oxford), Ph.D. (Cambridge), Assistant Professor
D. Nussbaum, B.A., M.A. (York), Ph.D. (Waterloo), Assistant Professor
E. Page-Gould, B.Sc. (Carnegie Mellon), Ph.D. (UC Berkeley), Assistant Professor
A.C. Ruocco, B.A. (York), M.Sc., Ph.D., C.Psych. (Drexel), Assistant Professor
A.A. Ulaszek, B.A. (Penn State), M.A., Ph.D. (Northwestern), Assistant Professor
D.A. Bors, B.A. (Florida), M.A. (Regina), Ph.D. (Toronto), Senior Lecturer
J.C. LeBoutillier, B.Sc., M.A., Ph.D. (Toronto), Senior Lecturer
S. Tran, B.A. (Oklahoma), M.S. (Texas A&M), Ph.D. (Minnesota), Lecturer

Associate Chair and Program Supervisor: TBA  Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge  Email: hdomloge@utsc.utoronto.ca
Psychology is that branch of science which seeks to understand behaviour and mind. Why organisms - human and infrahuman - act as they do is one of the most compelling and longstanding questions in the history of human thought. Philosophers, artists, novelists, theologians and others have sought the answer through a variety of means. Psychology uses the methods of scientific enquiry to address the question.

The areas of interest encompassed by the discipline of psychology include: How humans learn, adapt, and remember; how they change over their lifetimes; how they are affected by the presence of others; how their behaviour relates to their physiological functions; how mental processes can exhibit pathologies and how these pathologies can be treated. Our course offerings in Psychology include all of these topics, covering how psychologists go about answering the important questions in each, and what we have learned about each.

The Specialist Program in Psychology focuses on normal thought, feelings and behaviour whereas the Specialist Program in Mental Health Studies focuses on abnormal psychological processes. The Specialist Program in Psychology is intended both for students with a strong interest in the science of psychology and for those who wish to pursue graduate work in psychology after the first degree. The Specialist in Mental Health Studies is intended for students with a strong interest in pathologies of the mind and in their treatment. Students considering graduate study should plan to include the PSYD98Y3 (thesis course) in their undergraduate Program.

Two co-operative programs are offered, the Specialist (Co-operative) Program in Psychology and the Specialist (Co-operative) Program in Mental Health Studies. Admission to these programs which involve practical work experience is limited.

The Major Program in Psychology and the Major Program in Mental Health Studies are designed to introduce students to the main areas within each of these related disciplines. The Minor Program in Psychology is designed for students who are interested in a less intensive exposure to the field. Often, students wish to concentrate their studies in two areas, in which case a double Major Program combining psychology with another discipline is ideal. Programs in Mental Health Studies and Psychology cannot, however, be combined. Students particularly interested in the relation of brain to behaviour should consider the Neuroscience Programs described earlier in this Calendar.

Planning your Program in Psychology

Students should be aware that the A, B, C, D course structure in Psychology dictates the sequence in which courses should be taken, but not the year of study in which a given course must be taken. That is, A, B, C, and D do not correspond to first, second, third and fourth year. For example, it is recommended that PSYB07H3 and PSYC08H3 be taken consecutively in the two terms of second year. Courses in the Faculty of Arts and Science correspond to A-, B-, C- or D-level of study however not all 400-series are necessarily considered D-level. Students are encouraged to plan carefully so that they will meet their educational objectives over the years of their degree. Discussions with the Program Advisor can be very valuable in this regard.

Program Exclusion

Programs in Mental Health Studies and Psychology cannot be combined.

First-Year Students in Psychology

PSYA01H3 & PSYA02H3 are recommended in first year for students intending to pursue a Specialist or Major Program in Psychology or Mental Health Studies.

Courses in Neuroscience

Students interested in including Neuroscience courses in their Psychology or Mental Health Studies Program should consult the Neuroscience section for details.

Service Learning and Outreach (Previously known as Science Engagement)

For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of the Calendar.

SPECIALIST PROGRAM IN MENTAL HEALTH STUDIES (SCIENCE)

Associate Chair and Program Supervisor: TBA Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements

The program requires completion of 12.5 credits as follows including at least 4.0 credits at the C- or D-level of which at least 1.0 must be at the D-level:

1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II
   (1.0 credit)
2. Statistical Methods (1.0 credit)
   a) PSYB07H3 Data Analysis in Psychology
      and
   b) PSYC08H3 Advanced Data Analysis in Psychology
3. Laboratory Methods (1.0 credit)
a) PSYB01H3 Psychological Research Laboratory  
   and
b) PSYC37H3 Psychological Assessment
4. PSYC02H3 Scientific Communication in Psychology (0.5 credit)
5. History & Approaches (0.5 credit)
a. PSYC84H3 Psychology & the Scientific Mind  
   or
b. PSYC85H3 History of Psychology
6. PSYB30H3 Personality  
   and
   PSYB32H3 Abnormal Psychology  
   (1.0 credit)
7. Students are required to take 2.0 credits from either the psycho-social grouping or the psycho-biological grouping listed below, as well as 1.0 credit from the other grouping (3.0 credits):
   a. **Psycho-Social Grouping**
      - PSYB45H3 Behaviour Modification
      - PSYC18H3 The Psychology of Emotion
      - PSYC35H3 Advanced Personality Psychology
      - PSYC36H3 Psychotherapy
      - PSYC39H3 Psychology and the Law
   b. **Psycho-Biological Grouping**
      - PSYB64H3 Physiological Psychology
      - PSYB65H3 Human Brain & Behaviour
      - PSYC31H3 Clinical Neuropsychology
      - PSYC33H3 Neuropsychological Rehabilitation
      - PSYC62H3 Drugs and the Brain
8. Students are required to take 1.0 D-level credit, with at least 0.5 from the following list (1.0 credit)
   - PSYD30H3 Current topics in Personality Psychology
   - PSYD32H3 Personality Disorders
   - PSYD33H3 Current topics in Abnormal Psychology
   - PSYD35H3 Clinical Psychopharmacology
9. Additional credits in Psychology (1.5 credits)
10. Students must select 2.0 credits from the following courses:
    - HLTB01H3 Health, Aging, and the Life Cycle
    - HLTB02H3 Issues in Child Health and Development
    - HLTB03H3 Foundations in Health Studies
    - HLTC02H3 Women and Health: Past and Present
    - LINB20H3 Sociolinguistics
    - PHLA11H3 Introduction to Ethics
    - PHLB07H3 Happiness and Freedom
    - PHLB09H3 Biomedical Ethics
    - SOCA01H3 Introduction to Sociology I
    - SOCA02H3 Introduction to Sociology II
    - SOCB48H3 Family and Society
    - SOCB50H3 Deviance and Normality I
    - SOCB51H3 Deviance and Normality II
    - SOCC30H3 Criminal Behaviour

**SPECIALIST (CO-OPERATIVE) PROGRAM IN MENTAL HEALTH STUDIES (SCIENCE)**

*Program Supervisor: TBA*

*Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca*

The Program combines academic studies in the field of mental health with practical work experience. The work experience provided by the program enables students to explore career opportunities relevant to their studies in mental health. Completion of the program does not, however, represent a professional qualification in psychology, which requires further study at the graduate level. Work settings may also provide students with the opportunity to observe and assist psychologists engaged in clinical practice, hence providing a broader and more informed basis for the selection of a post graduate program appropriate to the student's talents and interests. Some work settings may provide the opportunity for clinical engagement under close supervision. For information on admissions, fees, work terms and standing in the Program, please see the Co-operative Programs section of this Calendar.

*Program Admission*

*Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from another U of T faculty or from another post-secondary institution, see the Co-operative Programs section of this Calendar.*
Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website at: www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits including PSYA01H3 & PSYA02H3 plus a cumulative GPA of at least 2.75.

Program Requirements
Work Terms
The program requires eight four month terms of study and two four month work terms over a four year period. To be eligible for their first work term, students must have completed at least 10.0 credits, including PSYB01H3, PSYB07H3, PSYB32H3, PSYB65H3, PSYC02H3, PSYC08H3, and PSYC32H3. Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term. Certain other courses specified below before the first work term is undertaken.

To be eligible for their second work term, students must have completed at least 12.5 credits, including certain courses specified below, and have received satisfactory evaluation for their performance and for their report on their first work term.

Course Requirements
The program requires 12.5 credits as follows including at least 4.0 credits at the C-level of which at least 1.0 must be at the D-level:

1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II
   (1.0 credit)

2. Statistical Methods (1.0 credit)
   a. PSYB07H3 Data Analysis in Psychology*
   and
   b. PSYC08H3 Advances Data Analysis in Psychology*

3. Laboratory Methods (1.5 credits)
   a. PSYB01H3 Psychological Research Laboratory*
   and
   b. PSYC32H3 Clinical Neuropsychology Laboratory*
   and
   c. PSYC37H3 Psychological Assessment**

4. PSYC02H3 Scientific Communication in Psychology* (0.5 credit)

5. History & Approaches (0.5 credit)
   a. PSYC84H3 Psychology & the Scientific Mind
   or
   b. PSYC85H3 History of Psychology

6. PSYB30H3 Personality
   and
   PSYB32H3 Abnormal Psychology*
   (1.0 credit)

7. Students are required to take 2.0 credits from either the psycho-social grouping or the psycho-biological grouping listed below, as well as 1.0 credit from the other grouping (3.0 credits):
   a. Psycho-Social Grouping
      PSYB45H3 Behaviour Modification
      PSYC18H3 The Psychology of Emotion
      PSYC35H3 Advanced Personality Psychology
      PSYC36H3 Psychotherapy
      PSYC39H3 Psychology and the Law
   b. Psycho-Biological Grouping
      PSYB64H3 Physiological Psychology
      PSYB65H3 Human Brain & Behaviour*
      PSYC33H3 Neuropsychological Rehabilitation**
      PSYC62H3 Drugs and the Brain

8. Students are required to take 1.0 D-level credit, with at least 0.5 credit from the following list:
   PSYD30H3 Current topics in Personality Psychology
   PSYD32H3 Personality Disorders
   PSYD33H3 Current topics in Abnormal Psychology
   PSYD35H3 Clinical Psychopharmacology

9. Additional credits in Psychology (1.0 credits)

10. Students must select 2.0 credits from the following courses:
    HLTB01H3 Health, Aging, and the Life Cycle
    HLTB02H3 Issues in Child Health and Development
    HLTB03H3 Foundations in Health Studies
HLTC02H3 Women and Health: Past and Present
LINB20H3 Sociolinguistics
PHLA11H3 Introduction to Ethics
PHLB07H3 Happiness and Freedom
PHLB09H3 Biomedical Ethics
SOCA01H3 Introduction to Sociology I
SOCA02H3 Introduction to Sociology II
(SOCB48H3) Family and Society
SOCB50H3 Deviance and Normality I
SOCB51H3 Deviance and Normality II
SOCC30H3 Criminal Behaviour

*These credits must be successfully completed before the first work term.
** These credits must be successfully completed before the second work term.

MAJOR PROGRAM IN MENTAL HEALTH STUDIES (SCIENCE)

Associate Chair and Program Supervisor: TBA  Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements
The program requires 7.0 credits as follows of which at least 2.0 must be at the C- or D-level:
1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II (1.0 credit)
2. PSYB07H3 Data Analysis in Psychology
   (0.5 credit)
3. Laboratory Methods (1.0 credit)
   PSYB01H3 Psychological Research Laboratory
   and
   PSYC37H3 Psychological Assessment
4. PSYB30H3 Personality
   and
   PSYB32H3 Abnormal Psychology
   (1.0 credit)
5. Students are required to take 1.0 credit from either the psycho-social grouping or the psycho-biological grouping listed below, as well as 0.5 credit from the other group (1.5 credits):
   a. Psycho-Social Grouping
      PSYB45H3 Behaviour Modification
      PSYC18H3 The Psychology of Emotion
      PSYC35H3 Advanced Personality Psychology
      PSYC36H3 Psychotherapy
      PSYC39H3 Psychology and the Law
   b. Psycho-Biological Grouping
      PSYB64H3 Physiological Psychology
      PSYB65H3 Human Brain & Behaviour
      PSYC31H3 Clinical Neuropsychology
      PSYC33H3 Neuropsychological Rehabilitation
      PSYC62H3 Drugs and the Brain
6. Credits at the D-level (0.5 credit)
7. Additional credits in Psychology (1.5 credits)

SPECIALIST PROGRAM IN PSYCHOLOGY (SCIENCE)

Associate Chair and Program Supervisor: TBA  Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements
The Program requires completion of 12.5 credits as follows including at least 4.0 at the C- or D-level of which at least 1.0 must be at the D-level:
1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II
   (1.0 credit)
2. Statistical Methods (1.0 credit)
   a. PSYB07H3 Data Analysis in Psychology
3. Laboratory Methods (1.0 credit)
   a. PSYB01H3 Psychological Research Laboratory
      and
   b. 0.5 credit from among the following:
      PSYC04H3 Brain Imaging Laboratory
      PSYC06H3 Psychophysiology Laboratory
      PSYC11H3 Social Psychology Laboratory
      PSYC26H3 Developmental Psychology Laboratory
      PSYC58H3 Cognitive Psychology Laboratory
      NROC63H3 Neuroscience Laboratory

4. PSYC02H3 Scientific Communication in Psychology (0.5 credit)

5. History and Approaches (0.5 credit)
   a. PSYC84H3 Psychology and the Scientific Mind
      or
   b. PSYC85H3 History of Psychology

6. Credits at the B-level and C-level (5.0 credits)
   Students are required to take 3.0 credits at the B-level or C-level from one of the two content groups listed below and 2.0 credits
   from the other group:
   a. Social and Developmental (courses listed in the 10- and 20-series);
   b. Perception, Cognition and Physiology (courses listed in the 50- and 60-series)

7. Credits at the D-level (1.0 credit)
   Students must take a 0.5 credit from each of the groupings listed below:
   a. Group One
      PSYD11H3 Psychology of Interpersonal Relationships
      PSYD12H3 Social Psychology of the Self
      PSYD15H3 Current Topics in Social Psychology
      PSYD16H3 Critical Analysis in Social Psychology
      PSYD18H3 Psychology of Gender
      PSYD20H3 Current Topics in Developmental Psychology
      PSYD22H3 Socialization Processes
      PSYD34H3 Human Intelligence
      PSYD57H3 Cognition, Health, Culture and Decision Making
   b. Group Two
      PSYD25H3 The Bilingual Brain
      PSYD26H3 Genes, Brain, and the Development of Mind
      PSYD50H3 Current Topics in Memory and Cognition
      PSYD51H3 Current Topics in Perception
      PSYD56H3 Creativity, Reasoning and Problem Solving
      PSYD58H3 The Scientific Study of Conscious and Unconscious Influences
      PSYD66H3 Current Topics in Human Brain and Behaviour

8. Additional credits in Psychology (2.5 credits)
   Students must choose 2.5 further credits from any of the remaining courses in Psychology. In selecting the 2.5 credits, 1.0 credit
   must be at the C- or D-level. Supervised study or thesis courses may be used to fulfill a maximum of 0.5 credit.

SPECIALIST (CO-OPE RATIVE) PROGRAM IN PSYCHOLOGY (SCIENCE)
Program Supervisor: TBA
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca
Co-op Contact: askcoop@utsc.utoronto.ca
The Program combines academic studies in the field of psychology with practical work experience. The work experience provided by
the program enables students to explore career opportunities relevant to their studies in psychology. Completion of the program does
not, however, represent a professional qualification in psychology, which requires further study at the graduate level. Work settings
may also provide students with the opportunity to observe psychologists interacting with other professionals, hence providing a
broader and more informed basis for the selection of a post graduate program appropriate to the student's talents and interests. Some
work settings will provide the opportunity for participation in basic or applied research. For information on admissions, fees, work
terms and standing in the Program, please see the Co-operative Programs section of this Calendar.

Program Admission
Prospective Applicants: For direct admission from secondary school or for students who wish to transfer to U of T Scarborough from
another U of T faculty or from another post secondary institution, see the Co-operative Programs section in this Calendar.
Current U of T Scarborough students: Application procedures can be found at the Registrar's Office website at:
www.utsc.utoronto.ca/subjectpost. The minimum qualifications for entry are 4.0 credits including PSYA01H3 & PSYA02H3 plus a
cumulative GPA of at least 2.75.
Work Terms
The program requires eight four month terms of study and two four month work terms over a four year period. To be eligible for their first work term, students must have completed at least 10.0 credits, including PSYB01H3, PSYB07H3, PSYC02H3 and PSYC08H3. Students must also successfully complete Arts & Science Co-op Work Term Preparation Activities, which include multiple networking sessions, speaker panels and industry tours along with seminars covering resumes, cover letters, job interviews and work term expectations, prior to their first work term. Certain other courses specified below before the first work term is undertaken. To be eligible for their second work term, students must have completed at least 12.5 credits, including certain courses specified below, and have received satisfactory evaluation for their performance and for their report on their first work term.

Course Requirements
The program requires the completion of 12.5 credits as specified for the Specialist Program in Psychology. The program provides a theoretical and methodological foundation for the study of psychological processes relevant to social behaviour, life-span development, perception, memory, language and thought. Students can apply for work term employment in settings such as survey research firms and in government departments and other agencies involved in providing support to persons with disabilities, educational organizations, and research and development departments in industry.

Program Requirements
The Program requires completion of 12.5 credits as follows including at least 4.0 credits at the C- or D-level of which at least 1.0 must be at the D-level:

1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II (1.0 credit)
2. Statistical Methods (1.0 credit)
   a. PSYB07H3 Data Analysis in Psychology*
   and
   b. PSYC08H3 Advanced Data Analysis in Psychology*
3. Laboratory Methods (1.0 credit)
   a. PSYB01H3 Psychological Research Laboratory*
   and
   b. 0.5 credit from among the following:
      PSYC04H3 Brain Imaging Laboratory
      PSYC06H3 Psychophysiology Laboratory
      PSYC11H3 Social Psychology Laboratory
      PSYC26H3 Developmental Psychology Laboratory
      PSYC58H3 Cognitive Psychology Laboratory
      NROC63H3 Neuroscience Laboratory
4. PSYC02H3 Scientific Communication in Psychology (0.5 credit)*
5. History and Approaches (0.5 credit)
   a. PSYC84H3 Psychology and the Scientific Mind
   or
   b. PSYC85H3 History of Psychology
6. Credits at the B-level and C-level (5.0 credits)
   Students are required to take 3.0 credits at the B-level or C-level from one of the two content groups listed below and 2.0 credits from the other group:
   a. Social and Developmental (courses listed in the 10- and 20-series);
   b. Perception, Cognition and Physiology (courses listed in the 50- and 60-series);
7. Credits at the D-level (1.0 credit)
   Students must take 0.5 credit from each of the groupings listed below:
   a. Group One
      PSYD11H3 Psychology of Interpersonal Relationships
      PSYD12H3 Social Psychology of the Self
      PSYD15H3 Current Topics in Social Psychology
      PSYD16H3 Critical Analysis in Social Psychology
      PSYD18H3 Psychology of Gender
      PSYD20H3 Current Topics in Developmental Psychology
      PSYD22H3 Socialization Processes
      PSYD34H3 Human Intelligence
      PSYD57H3 Cognition, Health, Culture and Decision Making
   b. Group Two
      PSYD25H3 The Bilingual Brain
      PSYD26H3 Genes, Brain, and the Development of Mind
PSYD50H3 Current Topics in Memory and Cognition
PSYD51H3 Current Topics in Perception
PSYD56H3 Creativity, Reasoning and Problem Solving
PSYD58H3 The Scientific Study of Conscious and Unconscious Influences
PSYD66H3 Current Topics in Human Brain and Behaviour

8. Additional credits in Psychology (2.5 credits)
   Students must choose 2.5 further credits from any of the remaining courses in Psychology. In selecting the 2.0 credits, 1.0 credit must be at the C- or D-level. Supervised study or thesis courses may be used to fulfill a maximum of 0.5 credit.
   (*) These credits must be successfully completed before the first work term.

MAJOR PROGRAM IN PSYCHOLOGY (SCIENCE)
Associate Chair and Program Supervisor: TBA  Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements
The Program requires completion of 7.0 credits as follows of which at least 2.0 credits must be at the C or D-level:
1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II
   (1.0 credit)
2. PSYB01H3 Psychological Research Laboratory
   (0.5 credit)
3. STAB22H3 Statistics I (recommended)
   or
   PSYB07H3 Data Analysis in Psychology
   Or
   SOCB06H3 Social Statistics
   (0.5 credit)
4. Credits at the B-level and C-level (2.5 full credits)
   Students are required to take 2.0 credits at the B-level or C-level from group (a) or (b) and 0.5 credit from the other group:
   a. Social and Developmental (courses listed in the 10- and 20-series);
   b. Perception, Cognition and Physiology (courses listed in the 50- and 60-series)
5. Credits at the D-level (0.5 full credit)
   Students must choose one half credit from the D-level offerings in Psychology. Certain D-level NRO courses may be used to fulfill this requirement with the approval of the Program Supervisor.
   Note: A 300-level course in PSY offered on another campus is comparable to a C-level course, even if listed as an exclusion to a D-level course. Hence, a 300-level course may not be used to satisfy the D-level program requirement, although it may be applied as appropriate to other program requirements. Courses at the 400-level count as D-level courses.
6. Additional credits in Psychology (2.0 credits). Students must choose 2.0 further credits from any of the remaining courses in Psychology. At least 1.0 credit from these must be at the C or D-level.

MINOR PROGRAM IN PSYCHOLOGY (SCIENCE)
Associate Chair and Program Supervisor: TBA  Email: psychology-program-supervisor@utsc.utoronto.ca
Course Support & Program Advisor: Hanan Domloge Email: hdomloge@utsc.utoronto.ca

Program Requirements
The Program requires completion of 4.0 credits as follows of which at least 1.0 credits must be at the C-level:
1. PSYA01H3 Introductory Psychology: Part I
   and
   PSYA02H3 Introductory Psychology: Part II
   (1.0 credit)
2. PSYB01H3 Psychological Research Laboratory (0.5 credit)
3. STAB22H3 Statistics I (recommended)
   or
   PSYB07H3 Data Analysis in Psychology
   Or
   SOCB06H3 Social Statistics (0.5 credit)
4. Students are required to select 0.5 credit at the B-level or C-level from each of the two content groups listed below (1.0 credit):
   a. Social, Developmental and Personality (courses listed in the 10-, 20- or 30-series);
   b. Learning, Perception, Cognition and Physiology (courses listed in the 40-, 50- or 60-series);
5. 1.0 additional credit in Psychology at the C-level
PSYA01H3 Introductory Psychology: Part I
This course provides a general overview of topics including research techniques in psychology, evolutionary psychology, the biology of behaviour, learning and behaviour, sensation, perception, memory and consciousness. The most influential findings from each of these areas will be highlighted.
Exclusion: PSY100H, PSY100Y, (PSY101H)
Breadth Requirement: Natural Sciences

PSYA02H3 Introductory Psychology: Part II
This course provides a general overview of topics including language, intelligence, development, motivation and emotion, personality, social psychology, stress, mental disorders, and treatments of mental disorders. The most influential findings from each of these areas will be highlighted.
Exclusion: PSY100H, PSY100Y, (PSY102H)
Breadth Requirement: Social & Behavioural Sciences

PSYA09H3 WikiScholar
Wikipedia is increasingly becoming the go-to location for anyone interested in learning about any topic, including topics related to Psychology. This course will allow students to take on the role of student-educator, working collaboratively to examine, enhance, and create Wikipedia entries related to a set of psychology topics.
Prerequisite: 4.0-7.0 full credits including PSYA01H3 & PSYA02H3 and permission of the instructor (Note: Normally students need a cumulative GPA of at least 3.5 for permission to be granted.)
Enrolment Limit: 35
Breadth Requirement: Natural Sciences

PSYB01H3 Psychological Research Laboratory
This course surveys the basic research techniques and designs used in the diverse field of psychological research, both in experimental and non-experimental areas. The topics range from the general principles of scientific research to concrete design issues, from sampling techniques to the typical problems faced when interpreting data.
Prerequisite: PSYA01H3 & PSYA02H3
Breadth Requirement: Social & Behavioural Sciences

PSYB07H3 Data Analysis in Psychology
This course focuses on the fundamentals of the theory and the application of statistical procedures used in research in the field of psychology. Topics will range from descriptive statistics to simple tests of significance, such as Chi-Square, t-tests, and one-way Analysis-of-Variance. A working knowledge of algebra is assumed. Students in the Specialist programs in Psychology, Psycholinguistics or Neuroscience will be given priority for this course.
Breadth Requirement: Quantitative Reasoning

PSYB10H3 Introduction to Social Psychology
Surveys a wide range of phenomena relating to social behaviour. Social Psychology is the study of how feelings, thoughts, and behaviour are influenced by the presence of others. The course is designed to explore social behaviour and to present theory and research that foster its understanding.
Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSY220H
Breadth Requirement: Social & Behavioural Sciences

PSYB20H3 Introduction to Developmental Psychology
Developmental processes during infancy and childhood. This course presents students with a broad and integrative overview of child development. Major theories and research findings will be discussed in order to understand how the child changes physically, socially, emotionally, and cognitively with age. Topics are organized chronologically beginning with prenatal development and continuing through selected issues in adolescence and life-span development.
Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSYB21H3, PSY210H
Breadth Requirement: Social & Behavioural Sciences

PSYB21H3 Introduction to Developmental Psychology: Focus on Education
Child and adolescent development in education. This course presents students with a broad and integrative overview of child development as it pertains to education. Topics are organized chronologically beginning with prenatal development and continuing through selected issues in adolescence and life-span development. In addition to the lecture component, students will complete a field placement in which they observe children's behaviour and think critically about development.
Prerequisite: Enrolment in CTEP
Exclusion: CTE100H, PSYB20H3, PSY210H
Recommended Preparation: PSYA01H3 & PSYA02H3
Breadth Requirement: Social & Behavioural Sciences

PSYB30H3 Personality
This course is intended to introduce students to the scientific study of the whole person in biological, social, and cultural contexts. The ideas of classical personality theorists will be discussed in reference to findings from contemporary personality research.
Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSY230H
Breadth Requirement: Social & Behavioural Sciences

PSYB32H3 Abnormal Psychology
This study of abnormal psychology is a search for why people behave, think, and feel in unexpected, sometimes bizarre, and typically self-defeating ways. Much less is known than we would like. However, this course will focus on the ways in which psychopathologists have been trying to learn the causes of abnormal behaviour and what they know about preventing and alleviating it.
Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSY240H, PSY340H
Breadth Requirement: Social & Behavioural Sciences

PSYB45H3 Behaviour Modification: Origins and Applications
A survey of attempts to regulate abnormal human behaviour. Basic principles of behavioural change including reinforcement, extinction, punishment and stimulus control; operant and respondent conditioning procedures; research strategies. Other topics include behavioural contracting.
cognitive-behaviour therapy, rational-emotive therapy, and systematic desensitization; treatment of phobias; treatment of alcohol and drug abuse.

Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSY260H
Breadth Requirement: Social & Behavioural Sciences

PSYB51H3 Perception and Cognition

Theory and research on perception and cognition, including visual, auditory, and tactile perception, representation, and communication. Topics include cognition and perception in the handicapped and normal perceiver; perceptual illusion, noise, perspective, shadow patterns and motion, possible and impossible scenes, human and computer scene-analysis, ambiguity in perception, outline representation. The research is on adults and children, and different species. Demonstrations and exercises form part of the course work.

Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: NROC64H3 & PSY280H
Breadth Requirement: Natural Sciences

PSYB57H3 Memory and Cognition

Discussion of experiments and theories in human memory and cognition. This course provides an analysis of the research on encoding, storage and retrieval of information in human memory. Also surveyed are the related topics of research on encoding, storage and retrieval of information in and cognition. This course provides an analysis of the general model of information processing.

Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: PSY270H
Recommended Preparation: PSYB07H3 or STAB22H3 or their equivalent
Breadth Requirement: Natural Sciences

PSYB64H3 An Introduction to Physiological Psychology

A survey of the biological mechanisms underlying fundamental psychological processes. Topics include the biological basis of motivated behaviour (e.g., emotional, ingestive, sexual, and reproductive behaviours; sleep and arousal), sensory processes and attention, learning and memory, and language.

Prerequisite: PSYA01H3 & PSYA02H3
Exclusion: NROC61H3, PSY290H
Breadth Requirement: Natural Sciences

PSYB65H3 Human Brain and Behaviour

The neurological basis of human behaviour: an introduction to human neuro-psychology. Hemispheric specialization, diseases of the central nervous system, behavioural consequences of damage to each of the cortical lobes, speech disorders, psychopharmacology, and the biological basis of psychiatric disorders will be covered.

Prerequisite: PSYA01H3 & PSYA02H3
Breadth Requirement: Natural Sciences

PSYC02H3 Scientific Communication in Psychology

How we communicate in psychology and why. The differences between scientific and non-scientific approaches to behaviour and their implications for communication are discussed. The focus is on improving the student's ability to obtain and organize information and to communicate it clearly and critically, using the conventions of the discipline.

Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3]
Corequisite: PSYC08H3
Enrolment Limit: Limited to students in the Specialist Programs in Psychology and in Mental Health Studies.
Breadth Requirement: Natural Sciences

PSYC04H3 Brain Imaging Laboratory

The course introduces brain imaging techniques, focusing on techniques such as high-density electroencephalography (EEG) and transcranial magnetic stimulation (TMS), together with magnet-resonance-imaging-based neuronavigation. Furthermore, the course will introduce eye movement recordings as a behavioural measure often co-registered in imaging studies. Students will learn core principles of experimental designs, data analysis and interpretation in a hands-on manner.

Prerequisite: PSYB01H3 & PSYB07H3
Enrolment Limit: 35
Breadth Requirement: Natural Sciences

PSYC06H3 Psychophysiology Laboratory

This course will provide students with an introduction to physiological processes that are related to psychological processes. Students will gain a theoretical background in psychophysiology as well as read key empirical papers related to the psychological correlates of each physiological system. This course will be a primary methods course for psychology specialists, such that students will acquire advanced skills involved in the acquisition of psychophysiological data and become well-versed in appropriate psychophysiological theory and inference.

Prerequisite: PSYB01H3
Recommended Preparation: PSYB07H3 & PSYC02H3
Enrolment Limit: 35
Breadth Requirement: Natural Sciences

PSYC08H3 Advanced Data Analysis in Psychology

This course is a continuation of PSYB07H3. The primary focus of this course is on the understanding of Analysis-of-Variance and its application to various research designs. Examples will include a priori and post hoc tests. Finally, there will be an introduction to multiple regression, including discussions of design issues and interpretation problems.

Prerequisite: [PSYB07H3 or SOCB06H3 or STAB22H3] & one additional B-level half-credit in Psychology
Exclusion: STAC52H3, PSY202H
Breadth Requirement: Quantitative Reasoning

PSYC11H3 Social Psychology Laboratory

Introduces conceptual and practical issues concerning research in social psychology, and provides experience with several different types of research. This course is designed to consider in depth various research approaches used in social psychology (such as attitude questionnaires, observational methods for studying ongoing social interaction). Discussion and laboratory work.

Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB10H3
Exclusion: PSY329H
Enrolment Limits: 25
Breadth Requirement: Social & Behavioural Sciences

PSYC12H3 The Psychology of Prejudice

A detailed examination of selected social psychological
topics introduced in PSYB10H3. This course examines the nature of attitudes, stereotypes and prejudice, including their development, persistence, and automaticity. It also explores the impact of stereotypes on their targets, including how stereotypes are perceived and how they affect performance, attributions, and coping.
Prerequisite: [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB10H3 plus one additional B-level half-credit in PSY
Exclusion: PSY320H, PSY322H
Breadth Requirement: Social & Behavioural Sciences

PSYC14H3 Cross-Cultural Social Psychology
A survey of the role of culture in social thought and behaviour. The focus is on research and theory that illustrate ways in which culture influences behaviour and cognition about the self and others, emotion and motivation. Differences in individualism and collectivism, independence and interdependence as well as other important orientations that differ between cultures will be discussed. Social identity and its impact on acculturation in the context of immigration will also be explored.
Prerequisite: [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB10H3 plus one additional B-level half-credit in PSY
Exclusion: PSY321H
Breadth Requirement: Social & Behavioural Sciences

PSYC18H3 The Psychology of Emotion
Emotion is examined in everyday life and in relation to the arts. The focus of this course is on a contrast between action and experience oriented approaches to emotion. An effort is made to synthesize the many theories of emotion coming from psychoanalysis, functionalism, behaviourism, social constructionism, and phenomenology.
Prerequisite: PSYB10H3
Exclusion: PSY331H, (PSY394), PSY494H
Breadth Requirement: Social & Behavioural Sciences

PSYC21H3 Advanced Developmental Psychology
An examination of selected issues pertaining to adult development and aging.
Examples of topics which may be considered: adaptation to parenthood, work-related functioning, continuity versus change in adulthood.
Prerequisite: PSYB20H3 plus one additional B-level half-credit in PSY
Exclusion: PSY313H
Recommended Preparation: PSYB07H3 or STAB22H3 or their equivalent
Breadth Requirement: Social & Behavioural Sciences

PSYC23H3 Developmental Psychobiology
Prerequisite: PSYB20H3
Breadth Requirement: Natural Sciences

PSYC25H3 How the Child Discovers Language
The effortless way that young children acquire language remains its most miraculous characteristic. Here, we discover the biological capacities and the important social factors that work together in language acquisition.
We challenge assumptions about Language versus Communication, establish the basic milestones, and evaluate prevailing theories stemming from leading brain imaging methods.
Prerequisite: PSYB20H3 & one course from the 50 or 60 series
Exclusion: JLP315H
Breadth Requirement: Natural Sciences

PSYC26H3 Developmental Psychology Laboratory
This course introduces conceptual and practical issues concerning research in developmental psychology. Developmental psychology focuses on the process of change within and across different phases of the life-span. Reflecting the broad range of topics in this area, there are diverse research methods, including techniques for studying infant behaviour as well as procedures for studying development in children, adolescents, and adults. This course will cover a representative sample of some of these approaches.
Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB20H3
Exclusion: PSY319H
Enrolment Limits: 24
Breadth Requirement: Social & Behavioural Sciences

PSYC31H3 Clinical Neuropsychology
Clinical neuropsychology is an applied science concerned with the behavioural expression of brain dysfunction. In this course we will first examine the brain and localization of neuropsychological function. We will then explore the science and practice of clinical neuro-psychology where tests measuring different neuropsychological domains (e.g., memory, attention and so on) are employed in patient populations to infer brain dysfunction. Students in the Specialist (Co-operative) Program in Mental Health Studies should enrol in PSYC32H3, not in this course.
Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB32H3 & PSYB65H3
Exclusion: PSYC32H3, PSY393H
Enrolment Limits: 75
Breadth Requirement: Natural Sciences

PSYC32H3 Clinical Neuropsychology Laboratory
The applied science concerned with the behavioural expression of brain dysfunction for students in the Specialist (Co-op) program in Mental Health Studies. Lecture and demonstration material will be as described for PSYC31H3, Clinical Neuropsychology, but students will also complete a laboratory component. The laboratory will afford the student the opportunity for hands-on experience with a number of neuropsychological measures and will emphasize the learning of specific test administration and interpretation.
Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB32H3 & PSYB65H3
Exclusion: PSYC31H3
Enrolment Limits: Enrolment is limited to students in the Specialist (Co-operative) Program in Mental Health Studies.
Breadth Requirement: Natural Sciences

PSYC33H3 Neuropsychological Rehabilitation
An examination of the therapeutic methods used to improve the capacity of a brain damaged individual to process
and use incoming information, enhancing functioning in everyday life. Students will be introduced to methods that aim to restore cognitive function by compensatory techniques. Neuropsychological rehabilitation problems caused by deficits in attention, visual processing, language, memory, reasoning/problem solving, and executive functioning will be stressed. Lectures and demonstrations. Students in the Specialist (Co-operative) Program in Mental Health Studies will have priority for entry to the course.
Prerequisite: [PSYC31H3 or PSYC32H3] & PSYB57H3

Breadth Requirement: Natural Sciences

**PSYC35H3 Advanced Personality Psychology**

This course is intended to advance students' understanding of contemporary personality theory and research. Emerging challenges and controversies in the areas of personality structure, dynamics, and development will be discussed.
Prerequisite: [PSYB07H3 or SOCB06H3 or STAB22H3] & PSYB30H3 plus one additional B-level half-credit in PSY Exclusion: PSY337H

Breadth Requirement: Social & Behavioural Sciences

**PSYC36H3 Psychotherapy**

This course will provide students with an introduction to prominent behavioural change theories (i.e. psychodynamic, cognitive/behavioural, humanist/existential) as well as empirical evidence on their efficacy. The role of the therapist, the patient and the processes involved in psychotherapy in producing positive outcomes will be explored.
Prerequisite: PSYB32H3
Exclusion: PSY343H

Enrolment Limits: Limited to students in the Mental Health Studies programs.

Breadth Requirement: Social & Behavioural Sciences

**PSYC37H3 Psychological Assessment**

This course deals with conceptual issues and practical problems of identification, assessment, and treatment of mental disorders and their psychological symptomatology. Students have the opportunity to familiarize themselves with the psychological tests and the normative data used in mental health assessments. Lectures and demonstrations on test administration and interpretation will be provided.
Prerequisite: PSYB32H3

Enrolment Limits: Limited to students in the Mental Health Studies programs.

Breadth Requirement: Social & Behavioural Sciences

**PSYC39H3 Psychology and the Law**

This course focuses on the application of psychology to the law, particularly criminal law including cognitive, neuropsychological and personality applications to fitness to stand trial, criminal responsibility, risk for violent and sexual recidivism and civil forensic psychology.
Prerequisite: PSYB32H3
Exclusion: (PSYC35H3), PSY328H, PSY344H

Breadth Requirement: Social & Behavioural Sciences

**PSYC34H3 Cognition and Representation**

Recent research on the psychology of representation, in pictures, words, metaphors, analogies and symbols. Topics will include developmental and cross-cultural research on children's drawing, the perception of pictures by the sighted, and blind people identifying raised pictures. It will also include studies on children and adults using literal and non-literal representation, including metaphors, similes, and analogies. It will include cross-cultural research on forms used as symbols, and studies on children and machines using symbols. Teaching method will be lectures and demonstrations.
Prerequisite: [PSYB07H3 or SOCB06H3 or STAB22H3] & a PSYB20-series or a PSYB50-series half-credit

Breadth Requirement: Natural Sciences

**PSYC55H3 Cognitive Neuroscience**

The goal of this course is to present and analyze current methods, findings and theories relating brain function to cognitive processes such as perception, action, attention, memory, learning, and problem-solving. Recently developed research methods of functional neuro-imaging (including PET, MEG, and functional MRI) will be described along with the important research findings that they have generated.
Prerequisite: PSYB57H3 & PSYB65H3
Exclusion: (PSY393), PSY493H

Breadth Requirement: Natural Sciences

**PSYC56H3 Music Cognition**

Studies the perceptual and cognitive processing involved in musical perception and performance. This class acquaints students with the basic concepts and issues involved in the understanding of musical passages. Topics will include discussion of the physical and psychological dimensions of sound, elementary music theory, pitch perception and melodic organization, the perception of rhythm and time, musical memory, musical performance, and emotion and meaning in music.
Prerequisite: [PSYA01H3 & PSYA02H3] & [PSYB07H3 or SOCB06H3 or STAB22H3] & a PSYB50-series half-credit

Breadth Requirement: Natural Sciences

**PSYC58H3 Cognitive Psychology Laboratory**

This course introduces conceptual and practical issues concerning research in cognitive psychology. Students will be introduced to current research methods through a series of practical exercises conducted on computers. By the end of the course, students will be able to program experiments, manipulate data files, and conduct basic data analyses.
Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3] & [PSYB51H3 or PSYB57H3]
Corequisite: PSYC08H3 is recommended but not required.
Exclusion: PSY379H

Enrolment Limits: 40

Breadth Requirement: Natural Sciences

**PSYC62H3 Drugs and the Brain**

An examination of behavioural and neurobiological mechanisms underlying the phenomenon of drug dependence. Topics will include principles of behavioural pharmacology and pharmacokinetics, neurobiological mechanisms of drug action, and psychotropic drug classification. In addition, concepts of physical and psychological dependence, tolerance, sensitization, and reinforcement and aversion will also be covered.
Prerequisite: [PSYB07H3 or its equivalent] & [at least one of PSYB64H3, PSYB65H3 or NROB60H3] & [one additional
B-level or C-level half credit in PSY or NRO]
Exclusion: PSY396H & PCL475Y
Breadth Requirement: Natural Sciences

PSYC84H3 Psychology and the Scientific Mind
This course examines how scientists think and make discoveries, gender differences in scientific thought, and how science is learned and taught. Are there similarities in the learning of concepts across all fields of inquiry such as music, politics and literature? We will also explore the media's role in shaping people's understanding of science.
Prerequisite: PSYB01H3 & one other B-level half-credit in Psychology
Breadth Requirement: History, Philosophy & Cultural Studies

PSYC85H3 History of Psychology
A survey of developments in Western philosophy and science which influenced the emergence of modern psychology in the second half of the Nineteenth Century. Three basic problems are considered: mind-body, epistemology (science of knowledge), and behaviour/motivation/ethics. We begin with the ancient Greek philosophers, and then consider the contributions of European scholars from the Fifteenth through Nineteenth Centuries. Twentieth Century schools are discussed including: psychoanalysis, functionalism, structuralism, gestalt, behaviourism, and phenomenology. This course is restricted to 3rd and 4th year students in Specialist Programs in Psychology, Mental Health Studies & Psycholinguistics.
Prerequisite: Two B-level half-credits in Psychology or permission of the instructor
Exclusion: PSY450H, (PSY300H)
Recommended Preparation: PSYB07H3 or STAB22H3 or their equivalent
Breadth Requirement: History, Philosophy & Cultural Studies

PSYC90H3
PSYC93H3 Supervised Study in Psychology
An intensive research project intended to provide laboratory/field experience in data collection and analysis. The project must be completed over 2 consecutive terms. These courses provide an opportunity to engage in research in an area after completing basic coverage in regularly scheduled courses. The student must demonstrate a background adequate for the project proposed and should present a clear rationale to prospective supervisors. Regular consultation with the supervisor is necessary, and extensive data collection and analysis will be required. Such a project will culminate in a written research report. Students must first find a supervisor before the start of the academic term in which the project will be initiated. They must then obtain a permission form from the Department of Psychology's website (www.utsc.utoronto.ca/psych/undergraduates) that is to be completed and signed by the intended supervisor, and returned to the Psychology Office. At that time, the student will be provided with an outline of the schedule and general requirements for the course, including the structure of the required log-book. Students seeking supervision off campus are further advised to check the appropriateness of the proposed advisor with the Program Supervisor. If the proposed supervisor is not appointed to the Psychology faculty at UTSC then a secondary advisor, that is appointed at UTSC, will be required.
Prerequisite: 3.0 full credits in Psychology & permission of the proposed supervisor. (Note: Normally students need a cumulative GPA of at least 2.7 for permission to be granted.)
Exclusion: For PSYC90H3: COGC91H3, NROC90H3, PSY303H,PSY304H For PSYC93H3: COGC92H3, NROC93H3, PSY303H, PSY304H

PSYD11H3 Psychology of Interpersonal Relationships
This course focuses on social psychological theory and research pertaining to close interpersonal relationships. The course will cover topics including perceptions of and interactions within close relationships, development and maintenance of relationships, and relationship conflict and dissolution.
Prerequisite: PSYB10H3 & [PSYC12H3 or PSYC14H3]
Exclusion: PSY420H, PSY424H, (PSY324H), PSYD15H3 if taken in Fall 2010, Winter 2011, or Summer 2011
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD12H3 Social Psychology of the Self
This seminar explores the topic of the self from an experimental social-psychological perspective, including an in depth analysis of the fundamental processes of the “hyphenated self:” self-knowledge, self-esteem, self-regulation, for just a few examples. This course is designed to not only introduce students to much of the important theory and research in the social psychology of the self, but also to develop critical thinking skills.
Prerequisite: PSYB10H3 & [PSYC12H3 or PSYC14H3]
Exclusion: PSY326H, PSY420H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD15H3 Current Topics in Social Psychology
An intensive examination of selected issues and research problems in social psychology.
Prerequisite: PSYB10H3 & [PSYC12H3 or PSYC14H3]
Exclusion: PSY326H, PSY420H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD16H3 Critical Analysis in Social Psychology
The development of social psychology is examined both as a discipline (its phenomena, theory, and methods) and as a profession. The Natural and Human Science approaches to phenomena are contrasted. Students are taught to observe the lived-world, choose a social phenomenon of interest to them, and then interview people who describe episodes from their lives in which these phenomena occurred. The students interpret these episodes and develop theories to account for their phenomena before searching for scholarly research on the topic.
Prerequisite: PSYC11H3 or PSYC12H3 or [PSYB10H3 plus one C-level half-credit in PSY]
Exclusion: PSY420H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD17H3 Social Neuroscience
This course provides an overview of the emerging field of social neuroscience. It explores how integrating theory and methods from cognitive psychology, physiology, and neuroscience can be used to address fundamental questions in...
social psychology and, ultimately, broaden our understanding of mind, brain, and behaviour in a social world.
Prerequisite: PSYC12H3 & [PSYB64H3 or PSYB65H3]
Exclusion: PSY473H, (PSY373H)
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD18H3 Psychology of Gender
This course focuses on theory and research pertaining to gender and gender roles. The social psychological and social-developmental research literature concerning gender differences will be critically examined. Other topics also will be considered, such as gender-role socialization.
Prerequisite: PSYB10H3 plus two C-level half-credit in PSY
Exclusion: PSY323H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD20H3 Current Topics in Developmental Psychology
An intensive examination of selected issues and research problems in developmental psychology. The specific content will vary from year to year with the interests of both instructor and students. Lectures, discussions, and oral presentations by students.
Prerequisite: PSYC21H3 or PLIC24H3 or [PSYB20H3 plus one C-level half-credit in PSY]
Exclusion: PSY410H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD22H3 Socialization Processes
The processes by which an individual becomes a member of a particular social system (or systems). The course examines both the content of socialization (e.g., development of specific social behaviours) and the context in which it occurs (e.g., family, peer group, etc.). Material will be drawn from both social and developmental psychology.
Prerequisite: PSYB10H3 & PSYB20H3 plus one C-level half-credit in PSY
Exclusion: PSY311H, PSY410H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD25H3 The Bilingual Brain
Prevailing views about bilingualism and the minds and brains of bilinguals are explored. Recent technological breakthroughs are considered that look inside the bilingual brain, and, for the first time, adjudicate among competing views. We further explore the bilingual brain as a new lens into the nature of cognitive and linguistic processing in all human brains.
Prerequisite: PSYC25H3
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD26H3 Genes, Brain and the Development of Mind
This course explores a new direction in developmental science that combines genetics, brain imaging, and human behavioural psycholinguistic and cognitive methods. Together, these three disciplines afford a new lens into the evolution of the human mind and its cognitive processes (including, attention, numeracy, language, reading disorders) and aspects of emotion and social cognition.
Prerequisite: PSYB20H3 & [PSYB51H3 or PSYB57H3]
Exclusion: PSYD20H3 (if taken in the 2008 Winter Session)
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD30H3 Current Topics in Personality Psychology
An intensive examination of selected issues and research problems in personality psychology. The specific content will vary from year to year.
Prerequisite: PSYB30H3 plus one C-level half credit in PSY
Exclusion: PSY430H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD32H3 Personality Disorders
This course reviews the latest research on the causes, longitudinal development, assessment, and treatment of personality disorders. Students will learn the history of personality disorders and approaches to conceptualizing personality pathology. Topics covered include “schizophrenia-spectrum” personality disorders, biological approaches to psychopathy, and dialectical behaviour therapy for borderline personality disorder.
Prerequisite: PSYB30H3 & PSYB32H3 plus 0.5 credit at the C-level in PSY
Exclusion: PSY430H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD33H3 Current Topics in Abnormal Psychology
An intensive examination of selected issues and research problems in abnormal psychology. The specific content will vary from year to year.
Prerequisite: PSYB32H3 plus one C-level half-credit in PSY
Exclusion: PSY440H
Enrolment Limit: 24
Breadth Requirement: Social & Behavioural Sciences

PSYD34H3 Human Intelligence
Part I of this course reviews the classical theories as well as past research strategies and findings in the field of human intelligence. Part II examines current work in the area. Part III critically considers the concept of heritability, how it is estimated, and its application to the investigation of individual and group differences on IQ tests.
Prerequisite: PSYB01H3 & [PSYB07H3 or SOCB06H3 or STAB22H3]
Recommended Preparation: PSYC08H3
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD35H3 Clinical Psychopharmacology
This course reviews the psychopharmacological strategies used for addressing a variety of mental health conditions including anxiety, depression, psychosis, impulsivity, and dementia. It will also address the effects of psychotropic drugs on patients or clients referred to mental health professionals for intellectual, neuropsychological and personality testing. Limitations of pharmacotherapy and its combinations with psychotherapy will be discussed.
Prerequisite: PSYB65H3 & PSYC62H3
Enrolment Limit: This course is restricted to students in the Mental Health Studies program.
Breadth Requirement: Natural Sciences
PSYD50H3 Current Topics in Memory and Cognition
An intensive examination of selected topics. The specific content will vary from year to year.
Prerequisite: PSYB57H3 plus one C-level half-credit in PSY
Exclusion: PSY470H, PSY471H
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD51H3 Current Topics in Perception
The course provides an intensive examination of selected topics in recent research on perception. Topics may include research in vision, action, touch, hearing and multisensory integration. Selected readings will cover psychological and neuropsychological findings, neuropsychological results, synaesthesia and an introduction to the Bayesian mechanisms of multisensory integration.
Prerequisite: PSYB51H3
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD56H3 Creativity, Reasoning and Problem Solving
The goal of this course is to look at the ways that brain mechanisms underlie creativity and the evolution of human thought. Special attention will be given to the way people think and change their thinking to create new concepts. These are the fundamental abilities that make us human.
Prerequisite: PSYB57H3
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD57H3 Cognition, Health, Culture and Decision Making
This will be a seminar course in which key topics in contemporary cognitive theory are discussed in relation to decision making tasks in domains such as health, the natural world and the economy. The common heuristics that people use to represent and modify concepts and the roles that culture plays in decision making will be discussed.
Prerequisite: Any C-level half-credit in the 50-series.
Exclusion: PSYD50H3 (if taken in the 2008 Winter Session)
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD58H3 The Scientific Study of Conscious and Unconscious Influences
This course focuses on empirical attempts to distinguish between conscious and unconscious processes, and to better understand the manner in which they combine to affect performance. The course will begin with a brief history of experiments studying conscious and unconscious influences, and will then shift to a detailed examination of more current approaches. Topics covered will include subliminal perception, conscious versus unconscious memory, and models of the relation between conscious and unconscious influences.
Prerequisite: PSYB57H3 and at least one C-level half-credit in Psychology
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD66H3 Current Topics in Human Brain and Behaviour
An extensive examination of selected human brain and behaviour topics introduced in PSYB65H3. The neural bases of mental functions such as language, learning, memory, emotion, motivation and addiction are examples of the topics that may be included. Students will be expected to read and discuss current empirical research in this field.
Prerequisite: PSYB65H3
Corequisite: One additional C-level half-credit in Psychology
Recommended Preparation: PSYB07H3 or STAB22H3 or their equivalent
Enrolment Limit: 24
Breadth Requirement: Natural Sciences

PSYD98Y3 Thesis in Psychology
This course offers the opportunity to engage in a year long research project under the supervision of an interested member of the faculty in Psychology. The project will culminate in a written report in the form of a thesis and a poster presentation. During the course of the year, at appropriate times, students will meet to present their own research proposals, to appraise the proposals of others, and to discuss the results of their investigation. Students must first find a supervisor, which is usually confirmed before the start of the academic term in which the project will be initiated. Students will meet as a group with the coordinator as well as individually with their supervisor. This course is restricted to Specialists in Psychology and Mental Health Studies with a cumulative GPA of 3.3 or higher. Students planning to pursue graduate studies are especially encouraged to enrol in the course. Students must obtain a permission form from the Psychology departmental website (www.utsc.utoronto.ca/psych/undergraduates) that is to be completed and signed by the intended supervisor, and submitted to the Psychology Office. At that time, the student will be provided with an outline of the schedule and general requirements for the course. Students seeking supervision off campus will need to arrange co-supervision with a faculty member in Psychology at this campus. Prerequisite: PSYB01H3 & PSYB07H3 & PSYC08H3, Psychology or Mental Health Studies Specialist, cumulative GPA of 3.3 or higher. Note: Registration in D-level courses on ROSI is tentative. This is to ensure spaces in these courses for students who need them to graduate at the end of the current session. ROSI will show your status in the course and its final confirmation.
Exclusion: NROD98Y3, COGD10H3, PSY400Y

PLIC15H3 Speech Perception
PLIC24H3 First Language Acquisition
PLIC55H3 Psycholinguistics
PLIC65H3 Quantitative Methods in Linguistics
PLIC66H3 Disorders of Speech and Language
PLIC67H3 Disorders of Speech and Language
PLIC75H3 Disorders of Speech and Language
Religion

Faculty List
D. Perley, B.A. (Carleton), M.A., Ph.D. (Toronto), Lecturer
H.C.H. Shiu, B.A., M.A., Ph.D. (Toronto), Lecturer

Program Director: David Perley (416-287-7170) Email: david.perley@utoronto.ca

The Program in Religion aims at fostering a student's understanding of religion as major expressions of the human condition and as historically powerful forces that shape human cultures and societies. It also seeks to develop a student's appreciation of the difficulties and possibilities inherent in undertaking a critical, disciplined study of religion. The location of the Program in the Department of Humanities and its connections with a variety of areas of study signal that neither the study of religion nor its data are the privileged possession of a single discipline. The hallmark of the Religion Program at University of Toronto Scarborough is its immediate connection with other programs such as African Studies, Classical Studies, Global Asia Studies, History, IEE, Journalism, Media Studies, Visual and Performing Arts, and Women's and Gender Studies. The topic also connects the Religion Program with disciplines outside of the Humanities such as Anthropology, English, Philosophy, and Sociology. The uniqueness of the Religion Program lies in its focus on the historical background of religion, themes that relate various religions with one another, and an analysis of the history of the study of religion itself. The Religion Program provides students the opportunity to examine religions as comparative objects of study and teaches students academic forms of discourse in which to interpret and describe religions.

Guidelines for 1st year course selection

Students who intend to complete a Religion program should include RLGA01H3 & RLGA02H3 in their 1st year course selection. Students are also strongly encouraged to take HUMA01H3 (Exploring Key Questions in Humanities) as early as possible in their studies. The Religion Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_re.html

MAJOR PROGRAM IN RELIGION (ARTS)
Undergraduate Advisor: 416-287-7184 Email: religion-undergrad-advisor@utsc.utoronto.ca

The Major Program in Religion is currently under review and new enrolment in it has been suspended indefinitely. Degree students who first enrolled at UTSC prior to the 2010 Summer Session should refer to the 2009/2010 UTSC Calendar.

MINOR PROGRAM IN RELIGION
Undergraduate Advisor: 416-287-7184 Email: religion-undergrad-advisor@utsc.utoronto.ca

Program Requirements
Students must complete 4.0 full credits as follows:
1. RLGA01H3 World Religions I
   and
   RLGA02H3 World Religions II
2. RLB10H3 Introduction to the Study of Religion
3. RLGC13H3 Religious Diversity in Speech and Text
   or
   RLGC14H3 Religion and Globalization: Continuities and Transformations
4. 2.0 additional full credits from the following list, with at least 0.5 of a full credit at the C- or D-level:
   a. Comparative Themes/Theoretical Approaches
      RLGB02H3 Living Religions: Rituals and Experiences
      RLGC13H3 Religious Diversity in Speech and Text (if not taken as a required course)
      RLGC14H3 Religion and Globalization: Continuities and Transformations (if not taken as a required course)
   b. Religious Traditions in Global and Historical Contexts
      CLAC22H3 Religions of the Ancient Mediterranean
      HISD63H3 The Crusades: I
      HISD64H3 The Crusades: II
      ANTC31H3 Ritual and Religious Action
      ANTC33H3 Conceptualizing Religion
      SOCC21H3 Sociology of Religion
   c. Religious Traditions in Global and Historical Contexts
      RLGC05H3 The Qur'an in Interpretive and Historical Context
      RLGC06H3 Saints and Mystics in Buddhism
      RLGC07H3 Topics in Buddhist Philosophy: Buddhist Ethics
      RLGC09H3 Islam in Asia
      RLGC10H3 Hinduism in South Asia and the Diaspora
      AFSB01H3 African World Views
      (RLGC12H3 Contemporary Engaged Buddhist Movements in Asia)
      CLAA05H3 Ancient Mythology I: Mesopotamia and Egypt
Religion

GASC33H3 Critical Perspectives in Global Buddhism

Religion and Culture

GASC30H3 Asian Religions and Culture
VPHB67H3 Religion in the Arts: Buddhist Arts and Cultures
VPHB75H3 Religion in the Arts: Hinduism and Buddhism
VPHB76H3 Religion in the Arts: Judeo-Christian Traditions
VPMB77H3 Music in Religion and Ritual
VPMA99H3 Music of the World's Peoples
VPHB75H3 Music in Islamic Cultures
ENGC16H3 The Bible and Literature I
ENGC17H3 The Bible and Literature II

Advanced Topics in the Study of Religion

RLGC04H3 Selected Topics in the Study of Religion I
RLGC41H3 Selected Topics in the Study of Religion II
RLGD01H3 Supervised Readings in the Study of Religion
RLGD02H3 Seminar in Religion

*Students may also take these courses, but they are advised that these courses have additional pre-requisites.

RLGA01H3 World Religions I
An introduction to major religious traditions of the world. This course emphasizes the history, beliefs, practices and writings of Hinduism, Jainism, Sikhism, Buddhism, Confucianism, Taoism, and Shinto.
Exclusion: (HUMB04H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGA02H3 World Religions II
An introduction to major religious traditions of the world. This course emphasizes the history, beliefs, practices, and writings of Judaism, Christianity and Islam.
Exclusion: (HUMB03H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGB02H3 Living Religions: Rituals and Experiences
Critical comparative study of the major Indian religious traditions.
Breadth Requirement: History, Philosophy & Cultural Studies

RLGB10H3 Introduction to the Study of Religion
An introduction to the academic study of religion, with special attention to method and theory.
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC05H3 The Qur'an in Interpretive and Historical Context
An exploration of the origins, content, interpretation, and significance of the Qur'an, with a particular emphasis on its relationship to the scriptural tradition of the Abrahamic faiths.
No knowledge of Arabic is required.
Prerequisite: RLGA02H3 or (RLGB01H3) or (HUMB03H3)
Exclusion: RLG351H, NMC285H, (HUMC17H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC06H3 Saints and Mystics in Buddhism
Comparative study of the Madhyamaka and Yogacara traditions, and doctrines such as emptiness (sunyata), Buddha-nature (tathagatagarbha), cognitive-representation only (vijnaptimatrata), the three natures (trisvabhava).
Prerequisite: RLGA01H3 or (HUMB04H3)
Exclusion: AS368Y
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC07H3 Topics in Buddhist Philosophy: Buddhist Ethics
Buddhism is a response to what is fundamentally an ethical problem - the perennial problem of the best kind of life for us to lead. Gotama was driven to seek the solution to this problem and the associated ethical issues it raises. This course discusses the aspects of sila, ethics and psychology, nirvana; ethics in Mahayana; Buddhism, utilitarianism, and Aristotle.
Prerequisite: RLGA01H3 or (HUMB04H3) or (PHLB42H3)
Exclusion: NEW214Y, (PHLC40H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC09H3 Islam in Asia
The course examines the development of Islam in the contexts of Asian religions and cultures, and the portrayal of the Muslim world in Asian popular culture.
Prerequisite: RLGA01H3 or (HUMB04H3)
Recommended Preparation: RLGC05H3
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC10H3 Hinduism in South Asia and the Diaspora
An examination of Hinduism in its contemporary diasporic and transnational modes in South Asia. Attention is also paid to the development of Hinduism in the context of colonialism.
Prerequisite: RLGA01H3 or (HUMB04H3)
Recommended Preparation: RLGB02H3
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC13H3 Religious Diversity in Speech and Text
Philosophical, anthropological, historical, and linguistic discussions about language use in a variety of religious contexts. The course examines the function of language through an analysis of its use in both oral and written form.
Prerequisite: Any 5 full credits, including RLGA01H3 or RLGA02H3 or RLGB10H3
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC14H3 Religion and Globalization: Continuities and Transformations
The course cultivates an appreciation of the global
perspective of religions in the contemporary world and how religious frameworks of interpretation interact with modern social and political realities. It provides a viewpoint of religion through ideas and issues related to globalization, syncretism, and modernity.

Prerequisite: Any 5 full credits, including RLGA01H3 or RLGA02H3 or RLGB10H3

Breadth Requirement: Social & Behavioural Sciences

RLGC40H3 Selected Topics in the Study of Religion I
Intensive study of selected topics discussed in RLGA01H3 (World Religions I) that will vary with each offering of the course.
Prerequisite: 2.0 full credits in RLG & permission of the instructor
Exclusion: (HUMC44H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGC41H3 Selected Topics in the Study of Religion II
Intensive study of selected topics discussed in

RLGA02H3 (World Religions II) that will vary with each offering of the course.
Prerequisite: 2.0 full credits in RLG & permission of the instructor
Exclusion: (HUMC43H3)
Breadth Requirement: History, Philosophy & Cultural Studies

RLGD01H3 Supervised Readings in the Study of Religion
A student-initiated research project to be approved by the Department and supervised by one of the faculty members.
Prerequisite: 2.0 full credits in RLG at the C-level & permission of the instructor

RLGD02H3 Seminar in Religion
A seminar for religion majors in which students have the opportunity, under the supervision of a member of the Religion faculty, to develop and present independent research projects focused around a set of texts, topics, and/or problems relevant to the study of religion.
Prerequisite: RLGB10H3 & 2 C-level courses in Religion
Enrolment Limits: 15

Social Sciences and Humanities Co-operative
Co-op Contact: askcoop@utsc.utoronto.ca

Co-operative Programs are enrichment programs designed to integrate related, practical experience with academic studies. All co-op programs are either Specialist or Major Programs and may be taken only as part of a four-year degree. Major Co-op Programs must be combined with another Major program. The co-op credits associated with the successful completion of work–term requirements are additional to the 20.0 academic credits required for a degree. For this reason, some co-op programs may take up to five years to complete. No student may be enrolled in more than one co-op program and all co-op students must be registered at U of T Scarborough in order to maintain their co-op status.

The Social Sciences and Humanities Co-operative Program allows students to combine their chosen humanities or social sciences program with work experience that draws upon the knowledge and skills acquired during their studies, and is applicable to future employment prospects. For a complete list of available programs please consult the Guide to Programs & Courses Offered in the Calendar. Programs in Visual and Performing Arts and in International Development Studies are not eligible for the Social Sciences and Humanities Co-op Program.

Notes:
1. For information on the Specialist (Co-operative) Program in Arts Management, which operates separately from the Social Sciences and Humanities Co-operative Program, please see the Visual and Performing Arts section in this Calendar.
2. For information on the Specialist (Co-operative) Program in International Development Studies (B.A.), which operates separately from the Social Sciences and Humanities Co-operative Program, please see the International Development Studies section in this Calendar.

Admissions
Prospective Applicants: For direct admission from secondary school, or for students who wish to transfer to U of T Scarborough from another faculty or from another post-secondary institution, see the Co-operative Programs section in this Calendar.
Current U of T Scarborough students: Application procedures can be found at the Registrar’s Office website at: www.utsc.utoronto.ca/subjectpost. A POST in a Social Sciences or Humanities Specialist or Major Program is required plus a cumulative GPA of at least 2.5.

Program Requirements
Overview
Co-op programs require at least eight four-month terms of full-time study, and the satisfactory completion of two four-month work terms. Work terms are evaluated by the program faculty, the Co-op Office, and the employer, and a grade of CR (credit)/NR (no credit) is recorded on the transcript. The credits earned for successful work term completion are in addition to the 20.0 credits required for the degree.

Curriculum
Students in Social Sciences and Humanities Co-op follow the course requirements of their chosen Specialist or Major program in the social sciences or humanities. In addition, they will take the Arts & Science Co-op Work Term Preparation Course COPD01H3 (also
referred to as NWOW- Navigating the World of Work)- which includes multiple networking sessions, speaker panels and industry engagement activities- during their first year of co-op. Following successful completion of COPD01H3, students are required to take COPD03H3 (also referred to as RC Prep- Recruitment Cycle Preparation)- which covers resumes, cover letters, job interviews, and work term expectations- prior to their first work term.

(Note: COPD01H3 and COPD03H3 are non-credit courses taken over and above a full course load in the first year.)

Work Terms
The work terms are an integral part of the co-op curriculum. To be eligible for their first work term, students must be in good standing in their chosen program (with a minimum 2.5 Cumulative Grade Point Average) and have completed at least 9.0 or 10.0 full credits, as specified by the particular program including a number of program specific credits towards the requirements of their Specialist Program or Major Program(s). To be eligible for their second work term, students must have received a satisfactory evaluation of their performance and work term report for their first placement.

For information on fees, work terms, and studying in the program, please see the Co-operative Programs section of this Calendar.

Society and Environment

MAJOR PROGRAM IN SOCIETY AND ENVIRONMENT (ARTS)
The Major Program in Society and Environment has been withdrawn from the curriculum. Every effort will be made to ensure that students currently enrolled in the program are able to complete it.

SOED01H3 Environmental Internship
This course offers students the opportunity to gain practical research experience as an intern with an environmental organization. Students will be required to arrange their own internship and to complete at least 50 hours of work with the organization. Evaluation will be based on a research paper.

Prerequisite: Completion of at least 10 full credits and prior permission of the program supervisor

Sociology

Faculty List
W.W. Isajiw, B.A. (LaSalle), M.A., Ph.D. (Catholic Univ. of America), Professor Emeritus
R. O’Toole, B.A. (Leeds), PGCE (London), M.A. (McMaster), Ph.D. (Toronto), Professor Emeritus
A. Sev'er, B.A., M.A. (Windsor), Ph.D. (York, Canada), Professor Emeritus
J. Hannigan, B.A., M.A. (Western Ontario), Ph.D. (Ohio State), Professor
J. Tanner, B.Sc. (London), PGCE (Leicester), M.A., Ph.D. (Alberta), Professor
J. Hermer, B.A. (Western), M.A. (Carleton), D.Phil. (Oxon.), Associate Professor
P-c. Hsiung, B.A. (National Chun-sing), M.A. (Chinese Cultural), M.A., Ph.D. (UCLA), Associate Professor
P. Landolt, B.A., M.A. (York), Ph.D. (Johns Hopkins), Associate Professor
A. Mullen, B.A. (Berkeley), M.A., Ph.D. (Yale), Associate Professor
S. Ungar, B.A. (McGill), M.A., Ph.D. (York, Canada), Associate Professor
J. Chun, B.A. (Dartmouth), M.A., Ph.D. (Berkeley), Assistant Professor
K. Liddle, B.A. (Oberlin), M.A. (Auburn), Ph.D. (Emory), Assistant Professor
R. Salem, M.A. (Oxford), Ph.D. (Princeton), Assistant Professor
D. Silver, B.A. (Berkeley), M.A., Ph.D. (Chicago), Assistant Professor

Discipline Representative: A. Mullen Email: mullen@utsc.utoronto.ca
Undergraduate Counsellor: J. Roopnarinesingh Email: social-sciences-counsellor@utsc.utoronto.ca

Sociology is the scientific study of interaction among people, the social relations which they establish, and the social groups which they form. Sociology explains how society is ordered, how it functions, and what accounts for social cohesion, social stratification, social mobility, and social change. It studies the consequences of co-operation, competition, and conflict.

Students may wish to take Sociology courses as a part of a general education, in anticipation of the usefulness of certain courses in future occupations or professions, or as part of a Specialist, Major or Minor Program.

The introductory courses, SOCA01H3 and SOCA02H3, are intended to familiarize students with the distinctive theories, methods and questions of sociology as a part of a liberal education. In addition, the courses provide a minimum background of knowledge about sociology, and hence are a prerequisite to all of the more advanced courses. Courses designated as an applied writing skills course provide students with applied skills assistance and guidance in drafting written work.

Planning a Program in Sociology
Students are obliged to take required courses in the Major and Specialist Programs as early in their careers as possible. For example, SOCA01H3 and SOCA02H3 should be taken during the first year, SOCB05H3, SOCB06H3, SOCB42H3 and SOCB43H3 should be
taken during the second year and SOCC40H3 and SOCC41H3 should be taken during the third year. Failure to do so may lead to timetable conflicts and could prolong the completion of the Program. Students are reminded that they are not permitted to register in courses for which they have not completed the prerequisites indicated in the Calendar. They may only enter a course for which they lack the prerequisites by obtaining the permission of the instructor prior to registration. Instructors have the right to request removal of any student ineligible for enrolment.

SPECIALIST PROGRAM IN SOCIOLOGY (ARTS)
Program Admission
Enrolment in the Specialist Program is limited. Students must normally apply to enter the Program after completing 4 or 5 full credits including SOCA01H3 and SOCA02H3. Decisions are made on Program admissions only twice a year, in May and in August, and are based on student requests submitted to the Registrar through ROSI. Admission is determined on the basis of a student's overall GPA and grades in SOCA01H3 and SOCA02H3. For students applying after 8-10 credits, admission will be on the basis of overall GPA and grades in SOC courses taken. Specialist students will be entitled to priority access to SOCB06H3, SOCB42H3, SOCB43H3, SOCC23H3 & SOCC31H3, for fall-winter sessions, during the summer early registration period.

Program Requirements
The Program requires completion of 12.0 full credits as described below. No more than 14.0 full credits in Sociology may be included in a four-year degree.
1. SOCA01H3 Introduction to Sociology I
   SOCA02H3 Introduction to Sociology II
2. SOCB05H3 Logic of Social Inquiry
3. SOCB06H3 Social Statistics
4. SOCB42H3 Classical Sociological Theory I
5. SOCB43H3 Classical Sociological Theory II
6. 2.0 full credits at B-level in Sociology
7. SOCC40H3 Contemporary Sociological Theory Part I
8. SOCC41H3 Contemporary Sociological Theory Part II
9. SOCC23H3 Practicum in Qualitative Research Methods
   or SOCC31H3 Practicum in Quantitative Research Methods
10. SOCD50H3 Capstone Course: Realizing the Sociological Imagination
11. 4.0 full credits in Sociology at C- or D-level of which at least 0.5 must be at the D-level.
   Note: Students may substitute courses from cognate disciplines with the prior approval of the program supervisor.
12. 1.0 other full credit in Sociology.

SPECIALIST (CO-OPERATIVE) PROGRAM IN SOCIOLOGY (ARTS)
The Specialist (Cooperative) Program in Sociology has been withdrawn from the curriculum. Every effort will be made to ensure that degrees students currently enrolled in the program are able to complete it. Degree students who first enrolled at UTSC prior to the 2011 Summer Session should refer to the 2010/2011 UTSC Calendar.

MAJOR PROGRAM IN SOCIOLOGY (ARTS)
Program Admission
Enrolment in the Major Program is limited. Students must normally apply to enter the Program after completing 4 or 5 full credits including SOCA01H3 and SOCA02H3. Decisions are made on Program admissions only twice a year, in May and in August, and are based on student requests submitted to the Registrar through ROSI. Admission is determined on the basis of a student's overall GPA and grades in SOCA01H3 and SOCA02H3. For students applying after 8-10 credits, admission will be on the basis of overall GPA and grades in SOC courses taken. Major students will be entitled to priority access to SOCB06H3, SOCB42H3 and SOCB43H3 for fall-winter sessions, in the summer early registration period.

Program Requirements
The Program requires completion of 7.0 full credits in Sociology including:
1. SOCA01H3 Introduction to Sociology I
   SOCA02H3 Introduction to Sociology II
2. SOCB05H3 Logic of Social Inquiry
3. SOCB06H3 Social Statistics
4. SOCB42H3 Classical Sociological Theory I
5. SOCB43H3 Classical Sociological Theory II
6. 4.0 full credits in Sociology, at least 2.0 of which must be at the C- or D-level

MINOR PROGRAM IN SOCIOLOGY (ARTS)
Program Admission
Admission to the Minor Program in Sociology is not limited. All students who apply for this Program will be admitted. However, students are warned that they are not guaranteed admission to B-level and C-level courses during fall and winter
session, and thus will be accommodated only after other. Program students have been admitted to these courses. Thus some courses may be unavailable, or available only in the summer.

**Program Requirements**

The Program requires completion of 4.0 full credits in Sociology including:

1. SOCA01H3 Introduction to Sociology I
2. SOCA02H3 Introduction to Sociology II
3. SOCB05H3 Logic of Social Inquiry
4. SOCB42H3 Classical Sociological Theory I
5. SOCB43H3 Classical Sociological Theory II
6. 1.5 additional full credits in Sociology including 1.0 at the C-level

**SOCA01H3 Introduction to Sociology I**

An introduction to the basic concepts, principles and methods of Sociology as a discipline for the study of society. Sociology I covers theory, methods, culture, social interaction and social stratification.

Exclusion: SOC101Y

Breadth Requirement: Social & Behavioural Sciences

**SOCA02H3 Introduction to Sociology II**

Sociology II applies the ideas from Sociology I to social institutions and processes. Topics covered include race and ethnicity, gender, urbanisation, globalisation, population and deviant behaviour.

Prerequisite: SOCA01H3

Exclusion: SOC101Y

Breadth Requirement: Social & Behavioural Sciences

**SOCB05H3 Logic of Social Inquiry**

This course introduces the logic of sociological research and surveys the major quantitative and qualitative methodologies. Students learn to evaluate the validity of research findings, develop research questions and select appropriate research designs.

Prerequisite: SOCA01H3 & SOCA02H3

Exclusion: SOC200H, SOC200Y, (SOCB40H3), (SOCB41H3)

Enrolment Limits: 170

Breadth Requirement: Quantitative Reasoning

**SOCB06H3 Social Statistics**

A consideration of elementary statistics including the summarizing of data, the logic of statistical decision-making and a number of common statistical tests. Statistics is a basic tool used by sociologists. An understanding of statistics is necessary for the student who wants to become an informed reader of social research. A working knowledge of elementary algebra is required. However, the lecturer will undertake brief reviews of mathematics as the need arises.

Prerequisite: SOCA01H3 & SOCA02H3


Enrolment Limits: 170

Breadth Requirement: Quantitative Reasoning

**SOCB22H3 Sociology of Gender**

This course examines gender as a sociological category that organizes and, at the same time, is organized by, micro and macro forces. By examining how gender intersects with race, ethnicity, class, sexuality, age, and other dimensions, we analyze the constitution and evolution of gendered ideology and practice.

Prerequisite: SOCA01H3 & SOCA02H3

Breadth Requirement: Social & Behavioural Sciences

**SOCB26H3 Sociology of Education**

This course offers a sociological perspective on a familiar experience: attending school. It examines the stated and hidden purposes of schooling; explores how learning in schools is organized; evaluates the drop-out problem; the determinants of educational success and failure; and, it looks at connections between school and work.

Prerequisite: SOCA01H3 & SOCA02H3

Enrolment Limits: 170

Breadth Requirement: Social & Behavioural Sciences

**SOCB27H3 Politics & Society: Global Transformations**

A sociological examination of contemporary social, economic, political, and environmental changes in a global context. Topics examined may include the changing nature of governance structures and state-society relations; the emergence of global integrated production; trade and financial systems; and the dynamics of local and transnational movements for global social change.

Prerequisite: SOCA01H3

Exclusion: SOC203Y

Enrolment Limits: 170

Breadth Requirement: Social & Behavioural Sciences

**SOCB42H3 Classic Sociological Theory I**

The development of classic sociological theory from its Enlightenment origins to the eve of the 20th century. Special emphasis is placed on the work of Adam Smith, Karl Marx, Alexis de Tocqueville, and Auguste Comte. Special tutorials are devoted to learning the craft of effective writing.

Prerequisite: SOCA01H3 & SOCA02H3

Exclusion: SOC203Y

Enrolment Limits: 170

Breadth Requirement: History, Philosophy & Cultural Studies

**SOCB43H3 Classic Sociological Theory II**

The development of classic sociological theory from the end of the 19th century to the eve of World War II. Special emphasis is placed on the work of Emile Durkheim, Max Weber, Georg Simmel, and G.H. Mead. Special tutorials are devoted to learning the craft of effective writing.

Prerequisite: SOCA01H3 & SOCA02H3 & SOCB42H3

Exclusion: SOC203Y

Enrolment Limits: 170

Breadth Requirement: History, Philosophy & Cultural Studies

**SOCB44H3 Sociology of Cities and Urban Life**

A theoretical and empirical examination of the processes of
urbanization and suburbanization. Considers classic and contemporary approaches to the ecology and social organization of the pre-industrial, industrial, corporate and postmodern cities. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC205Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB47H3 Social Inequality**
- A sociological examination of the ways in which individuals and groups have been differentiated and ranked historically and cross-culturally. Systems of differentiation and devaluation examined may include gender, race, ethnicity, class, sexual orientation, citizenship/legal status, and ability/disability. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC301Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB49H3 Sociology of Family**
- This course explores the family as a social institution, which shapes and at the same time is shaped by, the society in North America. Specific attention will be paid to family patterns in relation to class, gender, and racial/ethnic stratifications. Selected focuses include: socialization; courtship; heterosexual, gay and lesbian relations; gender division of labour; immigrant families; childbearing and childrearing; divorce; domestic violence; elderly care. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC214Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB50H3 Deviance and Normality I**
- This course explores how deviance and normality is constructed and contested in everyday life. The course revolves around the themes of sexuality, gender, poverty, race and intoxication. Particular attention will be paid to the role of official knowledge in policing social norms. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC212Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB51H3 Deviance and Normality II**
- This course explores how deviance and normality is constructed and contested in everyday life. The course revolves around the themes of sexuality, gender, poverty, race and intoxication. Particular attention will be paid to the role of official knowledge in policing social norms. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC212Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB53H3 Race and Ethnicity**
- The course draws on a geographically varied set of case studies to consider both the historical development and contemporary state of the sociological field of race, racialization and ethnic relations. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC210Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB54H3 Sociology of Work and Industry I**
- Economic activity drives human society. This course explores the nature of work, how it is changing, and the impact of changes on the transition from youth to adult life. It also examines racism in the workplace, female labour force participation, and why we call some jobs 'professions', but not others. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC207Y, SOC317Y, SOC370Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB55H3 Sociology of Work and Industry II**
- Is it just about the money? This course examines the factors that shape workplace behaviour - the effects of managerial control systems, technology and work groups; the expectations that people have of their jobs. It examines relationships between workers and management, trade unions and industrial conflict. It explores cheating in the workplace. 
Prerequisite: SOCA01H3 & SOCA02H3 
Exclusion: SOC207Y, SOC317Y, SOC370Y 
Enrolment Limits: 170 
Breadth Requirement: Social & Behavioural Sciences

**SOCB58H3 Sociology of Culture**
- An introduction to various ways that sociologists think about and study culture. Topics will include the cultural aspects of a wide range of social phenomena - including inequality, gender, economics, religion, and organizations. We will also discuss sociological approaches to studying the production, content, and audiences of the arts and media. 
Prerequisite: (SOCB40H3) & (SOCB41H3) & SOCB42H3 & SOCB43H3 
Enrolment Limits: 170 
Breadth Requirement: History, Philosophy & Cultural Studies

**SOCC03H3 Collective Behaviour**
- The study of uninstitutionalized group behaviour - crowds, panics, crazes, riots and the genesis of social movements. This course has been designated an Applied Writing Skills Course. 
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]] & SOCB42H3 & SOCB43H3 
Enrolment Limits: 60 
Breadth Requirement: Social & Behavioural Sciences

**SOCC04H3 Social Movements**
- The development of an approach to social movements which includes the following: the origin of social movements, mobilization processes, the career of the movement and its routinization. The course readings will be closely related to the lectures, and a major concern will be to link the theoretical discussion with the concrete readings of movements. 
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]] & SOCB42H3 & SOCB43H3 
Enrolment Limits: 60 
Breadth Requirement: Social & Behavioural Sciences
SOCC08H3 Gender and Information Technology

Examines transformation and perpetuation of gender stratification in relation to information technology (IT). It explores the roles of family, ideology, state policies, and other social institutions, and in the context of development and globalization. Students will develop and apply analytical skills to understand gender and IT in everyday life.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3 or (ISTB01H3) or IDSA01H3
Exclusion: SOC356Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC09H3 Sociology of Gender and Work

Examines the interaction of gender and work, both paid and unpaid work. Criminally assesses some cases for central theoretical debates and recent research. Considers gender differences in occupational and income attainment, housework, the relation of work and family, gender and class solidarity, and the construction of gender identity through occupational roles.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Exclusion: SOC366H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC10H3 Gendered Selves, Gendered Lives and Inequalities

Examines the interaction of gender and work, both paid and unpaid work. Critically assesses some cases for central theoretical debates and recent research. Considers gender differences in occupational and income attainment, housework, the relation of work and family, gender and class solidarity, and the construction of gender identity through occupational roles.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Exclusion: SOC366H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC11H3 Gendered Selves, Gendered Lives and Inequalities

Examines the interaction of gender and work, both paid and unpaid work. Critically assesses some cases for central theoretical debates and recent research. Considers gender differences in occupational and income attainment, housework, the relation of work and family, gender and class solidarity, and the construction of gender identity through occupational roles.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Exclusion: SOC366H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC16H3 Sociology of Conflict and Co-operation

This course examines the character of policing and security programs in advanced liberal democracies. Attention will be paid to the nature and enforcement of modern law by both state and private agents of order, as well as the dynamics of the institutions of the criminal justice system. This course has been designated an Applied Writing Skills Course.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Exclusion: SOC213Y, SOC306Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC21H3 Sociology of Religion

An examination of religion as a social institution. Consideration of the problem of appropriate definition precedes close analysis of the writings of major classic theories on the topic of religious belief and practice. The continuing significance of this work in contemporary theory and research is investigated.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Exclusion: SOC304Y, RLG210Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC23H3 Practicum in Qualitative Research Methods

This course provides students with hands-on experience conducting qualitative research. Each student will design and carry out a research project. Students will select their own research questions, review the relevant sociological literature, develop a research design, and conduct qualitative research, analyze, write up and present their findings. This course has been designated an Applied Writing Skills Course.
Prerequisite: 10 credits including SOCA01H3, SOCA02H3, SOCB05H3, SOCB06H3 & [a cumulative GPA of at least 2.7 or enrolment in the Specialist Program in Sociology or the Major Program in Public Policy].
Exclusion: SOC302H, (SOC23H3)
Enrolment Limits: 15
Breadth Requirement: Social & Behavioural Sciences

SOCC24H3 Changing Family Life in Canada

A theoretical and empirical examination of different forms of family and the major changes in the structure and interaction of family life in Canada. Of special interest are topics like women and work, race/ethnicity and family diversities, declining birth-rates, high divorce rates and new reproductive technologies.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC25H3 Ethnicity, Race and Migration

A theoretical and empirical examination of ethnic identity formation, race and racism, and their relationship to international migration.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or ([SOCB40H3) & (SOCB41H3)] & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences
SOCC26H3 Sociology of Urban Growth
An in-depth examination of major trends and theories of urban growth from the 19th century to the present. Topics include planning urban utopias (Ebenzer Howard, Le Corbusier, Frank Lloyd Wright); Jane Jacobs' urban neighbourhood; edge cities; new urbanist principles; spectacular consumption spaces; neo-bohemia, urban scenes and the creative city.
Prerequisite: SOCA01H3 & SOCA02H3 & (SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Exclusion: SOC386Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC27H3 Sociology of Suburbs and Suburbanization
This course examines the political economy of suburban development, the myth and reality of suburbanization as a way of life, the working class suburb, the increasing diversity of suburban communities, suburbia and social exclusion, and the growth of contemporary suburban forms such as gated communities and lifestyle shopping malls.
Prerequisite: SOCA01H3, SOCA02H3, SOCB44H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC29H3 Special Topics in Sociology of Family
A sociological and historical analysis of diverse family forms across the ages and in different geographic locations. How consensus versus conflict theories account for the changes in family forms and how subsistence patterns such as hunting-gathering, horticulture, agrarian and industrial patterns shape and alter the family forms and gender roles will be analyzed.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC30H3 Criminal Behaviour
The young figure prominently in people's views about, and fears of, crime. This course examines definitions of crime, how crime problems are constructed and measured. It looks at schools and the street as sites of criminal behaviour, and considers how we often react to crime in the form of moral panics. This course has been designated an Applied Writing Skills Course.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Exclusion: SOC306Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC31H3 Practicum in Quantitative Research Methods
This course provides students with hands-on experience conducting quantitative research. Each student will design and carry out a research project using secondary data. Students will select their own research questions, review the relevant sociological literature, develop a research design, conduct statistical analyses and write up and present their findings. This course has been designated an Applied Writing Skills Course.
Prerequisite: 10 credits including SOCA01H3, SOCA02H3, SOCB05H3, SOCB06H3 & [a cumulative GPA of at least 2.7 or enrolment in the Specialist Program in Sociology or the Major Program in Public Policy].
Exclusion: SOC300H, (SOCD31H3)
Enrolment Limits: 15
Breadth Requirement: Quantitative Reasoning

SOCC33H3 Comparative Social Structure
A comparative analysis of social systems, social institutions and social organizations which attempts to link the specific to the general and the local to the global in the area of social structure. Attention will be devoted to various case studies.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC34H3 Migrations & Transnationalisms
Examines the relationship between contemporary modes of international migration and the formation of transnational social relations and social formations. Considers the impact of trans-nationalisms on families, communities, nation-states, etc. This course has been designated an Applied Writing Skills Course.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & [(SOCB42H3 & SOCB43H3) or IDSB01H3]
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC35H3 Social Change
An examination of processes of change in social structures, social institutions and social organizations grounded in the investigation of general theories of social transformation. Special attention is devoted to the nature, causes and consequences of socio-cultural changes in the contemporary world.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC37H3 Environment and Society
This course links studies in the classical sociology of resources and territory (as in the works of Harold Innis, S.D.Clark, and the Chicago School), with modern topics in ecology and environmentalism. The course will include empirical research, and theoretical issues, in the relationship of various social systems to their natural environments.
Prerequisite: SOCA01H3 & SOCA02H3 & [SOCB05H3 or [(SOCB40H3) & (SOCB41H3)]) & SOCB42H3 & SOCB43H3
Exclusion: SOC385H
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC38H3 Gender and Education
An examination of a number of key issues in the sociology of education, focusing particularly upon gender and higher education.
SOCC39H3 Political Sociology
An examination of power in its social context. Specific attention is devoted to such topics as ideologies, parties, movements, nations, states and revolutions.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC40H3 Contemporary Sociological Theory Part I
The development of sociological theory from the end of World War II to the late 1960s. Special attention is devoted to the perspectives of Functionalism, Conflict Theory and Symbolic Interactionism. This course has been designated an Applied Writing Skills Course.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3
Exclusion: (SOCC05Y3)
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC41H3 Contemporary Sociological Theory Part II
The development of sociological theory from the 1960s to the present. Phenomenological, Socio-biological, Rational-Choice and other perspectives are explored.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3 & SOCC40H3
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC44H3 Media and Society
Provides an introduction to the emergence, organization and regulation of various media forms; social determinants and effects of media content; responses of media audiences; and other contemporary media issues.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3 & SOCC40H3
Exclusion: (SOCB56H3), (SOCB57H3)
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCC52H3 International Migration and Immigrant Incorporation
The course provides an overview of competing theories and concepts in the field of international migration and immigrant incorporation. Discussion puts the Canadian case in comparative perspective. Topics include global migration flows, refugeeship, citizenship and non-citizenship, economic incorporation, children of immigrants, and social exclusion.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3
Exclusion: (SOCB52H3) and SOC210Y
Enrolment Limits: 60
Breadth Requirement: Social & Behavioural Sciences

SOCD40H3
SOCD41H3 Supervised Independent Research
Independent research using field methods, survey analysis, library or archival research; regular supervision of data collection and analysis; final written research report. Intended for upper level students with well above average performance in sociology and whose interests or needs are not met by other sociology courses being offered.
Prerequisite: Completion of at least 15 full credits including SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB42H3 & SOCB43H3 & permission of the instructor & permission of the sociology supervisor of studies.
Exclusion: SOC390Y, SOC391H, SOC392H

SOCD42H3 Advanced Seminar in Sociological Theory
Exploration of significant topics of interest in contemporary sociological theory. Designed for and restricted to students enrolled in the final year of the Specialist Program in Sociology.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB06H3 & SOCB42H3 & SOCB43H3 & SOCC40H3 & SOCC41H3

SOCD44H3 Advanced Seminar on Issues in Contemporary Sociology
Exploration of current debates and controversies surrounding recent scholarly developments. Restricted to final year students taking a Specialist Program in Sociology.
Prerequisite: SOCA01H3 & SOCA02H3 & [(SOCB05H3 or [(SOCB40H3) & (SOCB41H3)])] & SOCB06H3 & SOCB42H3 & SOCB43H3 & SOCC40H3 & SOCC41H3

SOCD50H3 Capstone Course: Realizing the Sociological Imagination
This course presents students with the opportunity to integrate and apply their sociological knowledge and skills. Students will make their own original contribution to illuminating social life by selecting their own research question, reviewing relevant sociological literature, developing a research design, collecting and analyzing data, and composing a research paper.
Prerequisite: 10.0 credits including SOCA01H3, SOCA02H3, SOCB05H3, SOCB06H3 & [a cumulative GPA of at least 2.7 or enrolment in the Specialist Program in Sociology].
Enrolment Limits: 15
Breadth Requirement: Social & Behavioural Sciences
Statistics

Faculty List
M. Evans, B.Sc. (Western Ontario), M.Sc., Ph.D., Professor
B. Virag, Ph.D. (Berkeley), Professor
R. Salakhutdinov, Ph.D. (Toronto), Assistant Professor
K. Butler, Ph.D. (Simon Fraser University), Lecturer
S. Damouras, Ph.D. (Carnegie Mellon), Lecturer
M. Moras, Ph.D. (York), Lecturer
M. Samarakoon, M.Sc. (Alberta), Ph.D. (Toronto), Lecturer

Associate Chair: L.C. Jeffrey (416-287-7265)

Statistics have developed over a period of several hundred years as attempts to quantify uncertainty. With its origins in modeling games of chance, probability theory has become a sophisticated mathematical discipline with applications in such fields as demography, genetics and physics.

Statistics is concerned with the proper collection and analysis of data, both to reduce uncertainty and to provide for its assessment via probability. Applications range from pre-election polling to the design and analysis of experiments to determine the relative efficacies of different vaccines.

STAB22H3 and STAB27H3 serve as a non-technical introduction to statistics. These courses are designed for students from disciplines where statistical methods are applied.

Co-operative programs & Concurrent Teacher Education

Co-operative programs & Concurrent Teacher Education

The Specialist Program in Quantitative Analysis and the Major Program in Statistics are eligible for inclusion in the Co-operative Program in Physical Sciences and in the Concurrent Teacher Education Program (CTEP). Please refer to the Physical Sciences section, the Co-operative Programs section and the Concurrent Teacher Education section of this Calendar for further information.

Combining Statistics and Economics Programs

Students who wish to combine studies in statistics and economics should consult the Economics for Management section of this Calendar for information on the economics programs and restrictions on the order in which courses must be taken.

SPECIALIST PROGRAM IN QUANTITATIVE ANALYSIS (SCIENCE)

The Program in Quantitative Analysis is an interdisciplinary program designed for students interested in applying mathematical ideas and analysis to problems in the biological sciences, social and health sciences, physical sciences, and in finance and risk management. After completing this program students will be well prepared to pursue professional careers as quantitative analysts, go on to professional masters programs in such areas of application or to pursue research degrees in the areas in these fields that require a strong training in quantitative methods.

The program requires 13.0 credits in total. Students will be required to complete a culminating project course in their final year of studies that applies the computational, mathematical, or statistical skills they have acquired. It is strongly recommended that they complete the equivalent of a minor in an area of application. Suggested areas are: Mathematical Finance, Biological Sciences, Physical Sciences, and Social and Health Sciences. The program has streams corresponding to these. Students should select an area of application in consultation with the Supervisor of Studies. For the project course the student needs a supervisor in the appropriate department, also selected in consultation with the Supervisor of Studies.

The Specialist Program in Quantitative Analysis is eligible for inclusion in the Co-operative Program in Physical Sciences and in the Concurrent Teacher Education Program (CTEP). Please refer to the Physical Sciences section, the Co-operative Programs section and the Concurrent Teacher Education section of this Calendar for further information.

Service Learning and Outreach (Previously known as Science Engagement)

Service Learning and Outreach (Previously known as Science Engagement)

For experiential learning through community outreach and classroom in-reach, please see the Centre for Teaching and Learning section of this Calendar.

Program Requirements

This program requires 13.0 credits including at least 4.0 credits at the C- or D-level of which at least 1.0 must be at the D-level.

Writing requirement (0.5 credits)

(Should be completed by the end of second year.)

One of:
ANTA01H3, ANTA02H3, (CLAA02H3), (CTLA19H3), CTLA01H3, ENGA10H3, ENGA11H3, ENGB06H3, ENGB07H3, ENGB08H3, ENGB09H3, ENGB17H3, ENGB19H3, ENGB50H3, ENGB51H3, GGRA02H3, GGRA03H3, GGRB05H3,

First Year (3.0 credits specified)
CSCA08H3 Introduction to Computer Programming
CSCA48H3 Introduction to Computer Science
CSCA67H3 Discrete Mathematics for Computer Scientists
MATA23H3 Linear Algebra I
MATA31H3 Calculus I for Mathematical Sciences
MATA37H3 Calculus II for Mathematical Sciences

Second Year (4.0 credits specified)
CSCB07H3 Software Design
CSCB36H3 Introduction to the Theory of Computation
CSCB63H3 Design and Analysis of Data Structures
MATB24H3 Linear Algebra II
MATB41H3 Techniques of the Calculus of Several Variables I
MATB44H3 Differential Equations I
STAB52H3 Introduction to Probability
STAB57H3 Introduction to Statistics

Second, Third and Fourth Years
Students should choose a stream during their second year of studies which fits with the area of application that interests them.

Biological and Life Sciences Stream (5.0 credits)
CSCC43H3 Introduction to Databases
CSCD11H3 Machine Learning and Data Mining
MATB42H3 Techniques of the Calculus of Several Variables II
[MATB61H3 Linear Programming and Optimization
or CSCC73H3 Algorithm Design and Analysis]
MATC46H3 Differential Equations II
STAC52H3 Experimental Design
STAC62H3 Stochastic Processes
STAC67H3 Regression Analysis
STAD37H3 Multivariate Analysis
Plus 0.5 additional full credits from ACT, CSC, MAT or STA courses at the B-level or above.

Physical Sciences Stream (5.0 credits)
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCD37H3 Analysis of Numerical Algorithms for Computational Mathematics
MATB42H3 Techniques of the Calculus of Several Variables II
MATB43H3 Introduction to Analysis
MATC34H3 Complex Variables
MATC35H3 Chaos, Fractals and Dynamics
MATC46H3 Differential Equations II
STAC62H3 Stochastic Processes
Plus 1.0 additional full credit from ACT, CSC, MAT or STA courses at the B-level or above, of which at least 0.5 credit must be at the D-level.

Mathematical Finance, Management and Economics Stream (5.0 credits)
ACTB40H3 Fundamentals of Investment and Credit
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCD11H3 Machine Learning and Data Mining
MATB42H3 Techniques of the Calculus of Several Variables II
MATB61H3 Linear Programming and Optimization
MATC46H3 Differential Equations II
STAC62H3 Stochastic Processes
STAC67H3 Regression Analysis
STAC70H3 Statistics and Finance
STAD57H3 Time Series Analysis

Social and Health Sciences Stream (5.0 credits)
CSCC37H3 Introduction to Numerical Algorithms for Computational Mathematics
CSCC43H3 Introduction to Databases
MATB61H3 Linear Programming and Optimization
STAC52H3 Experimental Design
STAC62H3 Stochastic Processes
STAC67H3 Regression Analysis
STAD37H3 Multivariate Analysis
STAD57H3 Time Series Analysis
Plus 1.0 additional full credits from ACT, CSC, MAT or STA courses at the B-level or above.

Fourth year (0.5 credits)
One of:
CSCD94H3 Computer Science Project
MATD94H3 Mathematics Project
STAD94H3 Statistics Project

MAJOR PROGRAM IN STATISTICS (SCIENCE)
Supervisor of Studies: M. Samarakoon Email: mahinda@utsc.utoronto.ca

Recommended Writing Course: Students are urged to take a course from the following list of courses by the end of their second year: ANTA01H3, ANTA02H3, (CLAA02H3), (CTLA19H3), CTLA01H3, ENGA10H3, ENGA11H3, ENGB06H3, ENGB07H3, ENGB08H3, ENGB09H3, ENGB17H3, ENGB19H3, ENGB50H3, ENGB51H3, GGRA02H3, GGRA03H3, GGRB05H3, (GGRB06H3), (HISA01H3), HITA01H3, HUMA01H3, (HUMA11H3), (HUMA17H3), (LGGA99H3), LINA01H3, PHLA10H3, PHLA11H3, WSTA01H3.

MINOR PROGRAM IN STATISTICS (SCIENCE)
Supervisor of Studies: M. Samarakoon Email: mahinda@utsc.utoronto.ca

Program Requirements
This program requires 8.0 full credits.
First Year
[CSCA48H3 Introduction to Computer Science
or
PSCB57H3 Introduction to Scientific Computing]
MATA23H3 Linear Algebra I
[MATA30H3 Calculus I for Biological and Physical Sciences
or
MATA31H3 Calculus I for Mathematical Sciences] and
[MATA36H3 Calculus II for Physical Sciences
or
MATA37H3 Calculus II for Mathematical Sciences.] Note: The sequence MATA31H3 and MATA37H3 is recommended. MATA31H3 is the pre-requisite for MATA37H3.

Second Year
MATB24H3 Linear Algebra II
MATB41H3 Techniques of the Calculus of Several Variables I
MATB42H3 Techniques of the Calculus of Several Variables II
STAB52H3 An Introduction to Probability*
STAB57H3 An Introduction to Statistics*

Third and Fourth Year
STAC67H3 Regression Analysis*
2.0 full credits from any C- or D- (or 300-400 on St. George) level courses in STA
1.0 full credit from ACTB40H3, ACTB47H3 or any C- or D- (or 300-400 on St. George) level courses in CSC, MAT or STA*
STAB52H3, STAB57H3, STAC67H3 - These courses must be taken at UTSC. No substitutes are permitted without permission of the program supervisor.

Program Requirements
This program requires 4 full credits.
First Year (2.0 credits)
CSCA08H3 Introduction to Computer Programming
MATA23H3 Linear Algebra I
[MATA30H3 Calculus I for Biological and Physical Sciences
or
MATA31H3 Calculus I for Mathematical Sciences] and
[MATA36H3 Calculus II for Physical Sciences
or MATA37H3 Calculus II for Mathematical Sciences.

Note: The sequence MATA31H3 and MATA37H3 is recommended. MATA31H3 is the pre-requisite for MATA37H3.

**Second Year** (1.0 credit)
STAB52H3 An Introduction to Probability
STAB57H3 An Introduction to Statistics

**Third and Fourth Year** (1.0 credit)
STAC67H3 Regression Analysis

In addition 0.5 credits must be chosen from any C- or D-level STA course but not STAD29H3.

**SPECIALIST PROGRAM IN MATHEMATICS (SCIENCE)**
This program has a Statistics stream. For more information, see the Mathematics section of this Calendar.

**SPECIALIST PROGRAM IN NATURAL SCIENCES (SCIENCE)**
See the Physical Sciences section of this Calendar for more information.

**ACTB40H3 Fundamentals of Investment and Credit**
This course is concerned with the concept of financial interest. Topics covered include: interest, discount and present values, as applied to determine prices and values of annuities, mortgages, bonds, equities, loan repayment schedules and consumer finance payments in general, yield rates on investments given the costs on investments.

Prerequisite: [MATA30H3 & one of MATA35H3, MATA36H3 or MATA37H3] or [(MATA27H3) & a cumulative GPA of 2.5 or higher] 

Note: Students enrolled in or planning to enroll in any of the B.B.A. programs are strongly urged not to take ACTB40H3 because ACTB40H3 is an exclusion for MGTB09H3 (MGTC03H3), a required course in the B.B.A. degree. Students in any of the B.B.A programs will thus be forced to complete MGTB09H3 (MGTC03H3), even if they have credit for ACTB40H3, but will only be permitted to count one of ACTB40H3 and MGTB09H3 (MGTC03H3) towards the 20 credits required to graduate from UofT Scarborough.

Exclusion: ACT240H, MGTB09H3, (MGTC03H3).

Breadth Requirement: Quantitative Reasoning

**ACTB47H3 Introductory Life Contingencies**
This course provides an introduction to insurance and annuity concepts from a mathematical point of view. Topics covered include: probability theory applied to survival and to cost and risks of life assurances, life annuities, and pensions, analysis of survival distributions, international actuarial notation, annual benefit premium.

Prerequisite: ACTB40H3 & MATB41H3 & STAB52H3
Exclusion: ACT247H

Breadth Requirement: Quantitative Reasoning

**STAB22H3 Statistics I**
This course is a basic introduction to statistical reasoning and methodology, with a minimal amount of mathematics and calculation. The course covers descriptive statistics, populations, sampling, confidence intervals, tests of significance, correlation, regression and experimental design.

A computer package is used for calculations.

Exclusion: ANT35H1, ECMB11H3, POLB11H3, PSYB07H3, SOCB06H3, STAB52H3, STAB57H3, STA220H, STA250H

Breadth Requirement: Quantitative Reasoning

**STAB27H3 Statistics II**
This course follows STAB22H3, and gives an introduction to regression and analysis of variance techniques as they are used in practice. The emphasis is on the use of software to perform the calculations and the interpretation of output from the software. The course reviews statistical inference, then treats simple and multiple regression and the analysis of some standard experimental designs.

Prerequisite: STAB22H3
Exclusion: ECMB12H3, STAB57H3, STA221H, STA250H
Breadth Requirement: Quantitative Reasoning

**STAB52H3 An Introduction to Probability**
A mathematical treatment of probability. The topics covered include: the probability model, density and distribution functions, computer generation of random variables, conditional probability, expectation, sampling distributions, weak law of large numbers, central limit theorem, Monte Carlo methods, Markov chains, Poisson processes, simulation, applications. A computer package will be used.

Prerequisite: MATA33H3 or MATA36H3 or MATA37H3
Exclusion: STAB22H3, STA107H, STA257H
Breadth Requirement: Quantitative Reasoning

**STAB57H3 An Introduction to Statistics**
A mathematical treatment of the theory of statistics. The topics covered include: the statistical model, data collection, descriptive statistics, estimation, confidence intervals and P-values, likelihood inference methods, distribution-free methods, bootstrapping, Bayesian methods, relationship among variables, contingency tables, regression, ANOVA, logistic regression, applications. A computer package will be used.

Prerequisite: STAB52H3
Exclusion: STA261H
Breadth Requirement: Quantitative Reasoning

**STAC52H3 Experimental Design**
The statistical aspects of collecting and analyzing experimental data. Complete randomization and restricted randomization schemes.

Prerequisite: STAB27H3 or STAB57H3
Exclusion: STA332H
Breadth Requirement: Quantitative Reasoning

**STAC62H3 Stochastic Processes**
This course continues the development of probability theory begun in STAB52H3. Topics covered include Poisson
processes, Gaussian processes, Markov processes, renewal
tree, queuing theory, martingales and stochastic differential
equations.
Prerequisite: STAB57H3
Breadth Requirement: Quantitative Reasoning

STAC67H3 Regression Analysis
Orthogonal projections. Univariate normal distribution
theory. The linear model and its statistical analysis, residual
analysis, influence analysis, collinearity analysis, model
selection procedures. Analysis of designs. Random effects.
Models for categorical data. Nonlinear models. Instruction in
the use of SAS.
Prerequisite: STAB57H3
Exclusion: STA302H
Breadth Requirement: Quantitative Reasoning

STAC70H3 Statistics and Finance
The course discusses the use of statistical methods in
finance. Topics covered include returns, random walks and
the efficient market hypothesis, portfolio theory, the capital
asset pricing model, options pricing, value-at-risk, time series
and GARCH models.
Prerequisite: ACTB40H3 & STAC67H3
Breadth Requirement: Quantitative Reasoning

STAD29H3 Statistics for Life & Social Scientists
The course discusses many advanced statistical methods
used in the life and social sciences. Emphasis is on learning
how to become a critical interpreter of these methodologies
while keeping mathematical requirements low. Topics
covered include multiple regression, logistic regression,
discriminant and cluster analysis, principal components and
factor analysis.
Prerequisite: STAB27H3
Exclusion: All C-level/300-level & D-level/400-level
STA courses or equivalents except STA322H.
Breadth Requirement: Quantitative Reasoning

STAD37H3 Multivariate Analysis
Linear algebra for statistics. Multivariate distributions, the
multivariate normal and some associated distribution theory.
Multivariate regression analysis. Canonical correlation
analysis. Principal components analysis. Factor analysis.
Cluster and discriminant analysis. Multidimensional scaling.
Instruction in the use of SAS.
Prerequisite: STAC67H3
Exclusion: STA437H, (STAC42H3)
Breadth Requirement: Quantitative Reasoning

STAD57H3 Time Series Analysis
An overview of methods and problems in the analysis of
time series data. Topics covered include descriptive methods,
filtering and smoothing time series, identification and
estimation of times series models, forecasting, seasonal
adjustment, spectral estimation. Instruction in the use of SAS.
Prerequisite: STAC62H3
Exclusion: STA457H, (STAC57H3)
Breadth Requirement: Quantitative Reasoning

STAD94H3 Statistics Project
A significant project in any area of statistics. The project
may be undertaken individually or in small groups. This
course is offered by arrangement with a statistics faculty
member. This course may be taken in any session and the
project must be completed by the last day of classes in the
session in which it is taken. Students must obtain consent
from the Supervisor of Studies before registering for this
course

Visual and Performing Arts

Faculty List
G. Scavizzi, M.A., Ph.D. (Turin), Professor Emeritus
M.S. Shaw, M.A., Ph.D. (Bryn Mawr), Professor Emerita
M. Gervers, A.B. (Princeton), M.A. (Poitiers), Ph.D. (Toronto), Professor
W.R. Bowen, M.A., Ph.D. (Toronto), Associate Professor
L. Carney, M.A. (Columbia), Associate Professor
E.A. Harney, M.Phil., Ph.D. (London), Associate Professor
J. Mayo, M.A., Ph.D. (Toronto), Associate Professor
M.Q. Schonberg, M.A., Ph.D. (Toronto), Associate Professor
P. Speridakos, B.A. (McGill), M.A., Ph.D. (Toronto), Associate Professor
A. Stanbridge, M.A. (Wolverhampton), Ph.D. (Carleton), Associate Professor
S.D. Lee, B.Mus., M.A. (Western), Ph.D. (UBC), Associate Professor
K.A. McLeod, M.A. (McMaster), Ph.D. (McGill), Associate Professor
B. Freeman, B.A., M.A., Ph.D., Assistant Professor
Y. Gu, B.A., M.A. (Fudan), Ph.D. (Brown), Assistant Professor
R. Bai, B.A., M.A. (Beijing Foreign Studies), Ph.D. (Illinois), Assistant Professor
S.L. Helwig, B.A. (Guelph), M.A. (Toronto), Senior Lecturer
T. Lamie, B.A. (Dalhousie), M.F.A. (York), Senior Lecturer
T. Mars, Senior Lecturer
A. Rapoport, Mus.M., Mus.Doc. (Toronto), Senior Lecturer
Y. Brotman, B.A. (Manitoba), B.Ed., M.V.S. (Toronto), Lecturer
T.A. Frost, B.A. (Saskatchewan), M.A. (City University, London), Lecturer
M. Hlady, B.F.A. (Victoria), M.F.A. (York), Lecturer
D. Hlynsky, B.F.A. (Ohio State), Lecturer
Program Director: TBA
Email: art-culture-program-supervisor@utsc.utoronto.ca

Art history, arts management, music, studio, theatre & performing arts together constitute Visual and Performing Arts. Recognizing that much artistic work crosses the boundaries traditionally seen as separating one art form from another, Visual and Performing Arts invites exploration of the links and commonalities among the arts, in addition to providing opportunities for study in individual art areas.

All students will benefit greatly by going to the many arts events offered at U of T Scarborough, which include exhibitions in the Doris McCarthy Gallery and readings, plays, films and concerts. Events listings may be obtained from Arts & Events Programming (416-208-4769). Students should also consider participating actively in the choir or instrumental ensembles, the student gallery, or in the public productions in the Leigha Lee Browne Theatre. Please contact the program supervisors in music, studio or drama for details.

Specialist Programs
- Arts Management
- Arts and Culture - Studio

Major Programs
- Art History
- Music and Culture
- Studio
- Theatre & Performance Studies

Minor Programs
- Art History
- Music and Culture
- Studio
- Theatre & Performance Studies

See below for Co-op opportunities related to the Specialist Program in Arts Management. For Co-op opportunities related to the Major Programs above, please see the Humanities and Social Sciences Co-operative section of this Calendar. VPA Programs are outlined below.

To find descriptions of individual courses see the end of program listings.

The VPA Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_ac.html

SPECIALIST PROGRAM IN ART AND CULTURE (ARTS)
The Specialist Program in Art and Culture is currently under review and new enrolment in all streams except Studio has been suspended indefinitely. Degree students in the Art History stream, the Curatorial Studies stream, the Music stream and the Theatre and Performance Studies stream, who first enrolled UTSC prior to the 2011 Summer Session, should refer to the 2010/11 UTSC Calendar. Students in the Studio stream should refer to the following:

Specialist Program in Arts and Culture, Studio Stream
Undergraduate Advisor: Email: art-culture-program-supervisor@utsc.utoronto.ca

Enrolment in the Specialist in Art and Culture (Studio) is limited. Students must apply to enter the program after completing four credits including VPSA62H3 and VPSA63H3. Decisions are made on program admissions only twice a year, in May and August, and are based on student requests submitted to the Registrar through ROSI. Admission is determined on the basis of a student’s overall GPA and grades in VPSA62H3 and VPSA63H3. For students applying after 8-10 credits, admission will be based on the overall GPA and grades in VPS courses taken.

Studio stream
The Specialist in Art and Culture (Studio) requires 14 full credits, including 4 full credits at the C- or D- level of which at least 1.0 must be at the D-level.

1. (3.5 credits)
- HUMA01H3 Exploring Key Questions in the Humanities
- MDSA01H3 Introduction to Media Studies
- VPSA62H3 Foundation Studies in Studio
- VPSA63H3 But Why is it Art?
- VPSA70H3 Drawing I
- VPSB74H3 Drawing II
2. (0.5 credit)
One of the following:
- VPSC66H3 Theory and Practice: Two-Dimensional Work
- VPSC68H3 Theory and Practice: Time-Based Work
- VPSC69H3 Theory and Practice: Art in a Globalizing World
- VPSC70H3 Theory and Practice: New Media in Studio

3. (6 credits)
6.0 additional credits from VPS of which at least 1.5 credits should be at the C level and 1.0 credit at the D level.

4. (3 credits)
- VPHA46H3 Ways of Seeing: Introduction to Art Histories
2.5 additional credits in art history of which 1 full credit should be at the C level.

5. (1 credit)
1.0 credit from the following:
- IEEB02H3 Senses, Sensibility, Sensuality
- IEEB03H3 Time, Story, Perspective
- IEEC01H3 Theories and Methods in the Study of Society and Culture
- IEEC03H3 History of Animals and People
- MDSA02H3 History of Media and Technology
- MDSB05H3 Media and Globalization
- MDSB61H3 Critical Approaches to Digital Media
- MDSB62H3 Understanding Visual Culture

VPAA05H3 Collaborations in the Visual and Performing Arts
An introduction to interdisciplinary collaboration in art and culture. Drawing on a wide range of examples from the disciplines of visual art, music, and theatre, in high art and popular culture, this course explores relationships between and across the arts, tracing the history and development of inter-disciplinarity.
Breadth Requirement: Arts, Literature & Language

VPAC04H3 "Live!"
"Live!" investigates interdisciplinary modes of contemporary performance. Within a studio context, this course serves as an advanced exploration of 21st century Live Art. This interactive course reviews the dynamics of time, space and existence, and asks fundamental questions about the body and performance.
Prerequisite: (VPDC06H3), (VPSC57H3)
Recommended Preparation: HUMA01H3
Breadth Requirement: Arts, Literature & Language

VPAC89H3 Sound and Spectacle: Intersections and Exchanges in Music and the Visual Arts
Bringing together students and instructors from music and art history, the seminar investigates selected historical and cultural themes through a study of unique intersections between these fields. An interdisciplinary approach encourages critical analysis and evaluation of interpretation, cultural context and reception from a variety of perspectives.
Prerequisite: [VPHA46H3 & at least one VPH course at the B-level] or [at least one course from the sequence VPMB80H3-VPMB82H3]
Recommended Preparation: HUMA01H3
Breadth Requirement: History, Philosophy & Cultural Studies

VPAD07H3 Agency and Pluralism in Social and Cultural Transformations
Transformations in social and cultural institutions have been achieved through the agency of individuals who have embedded the values of pluralism in their personal and professional lives. Students will explore model examples and will develop projects they might use to advance this aim in a variety of professional situations.
Prerequisite: (VPAB06H3) or VPAB07H3
Breadth Requirement: Social & Behavioural Science

Art History
Program Director: Until June 30- E. Webster Email: webster@utsc.utoronto.ca From July 1- L. Carney Email: carney@utsc.utoronto.ca

Art History at UTSC focuses on the global and contemporary and also gives you a solid grounding in approaches to visual materials produced across time, cultures, classes, gender, and geography. You will learn to look, read and write critically about the visual, not only in the classroom, but also through real-world learning experience in galleries and museums and in other urban situations. You will understand how and why histories are written, how representations are formed, and how artists, critics, curators, dealers, and art historians (in other words, art world players) enter a shared discourse. The courses reveal the multiplicity of perspectives with which art may be approached and appreciated. Using recent methodologies that consider the works of art in the specific visual cultures of their day and in the social, political, and economic contexts in which the artists lived and worked.
Note: that (VPAC47H3), (VPAC48H3), and VPAC89H3 are interdisciplinary courses that count toward the art history Major and Minor programs.

Guidelines for first year course selection
Students who intend to complete an Art History program should include HUMA01H3 and an A-level Art History course in their first year course selection.
The Art History Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_ah.html

MAJOR PROGRAM IN ART HISTORY (ARTS)
Undergraduate Advisor Email: art-history-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 7.5 full credits as follows:
1. HUMA01H3 plus one-half credit at the A-level in Art History.
2. VPHB39H3
3. 3.5 full credits at the B-level in Art History VPAB05H3 & (VPAB06H3) may be used towards this requirement.
4. 2.5 full credits in Art History at the C-/D-level (which may include (VPAC47H3), (VPAC48H3), VPAC89H3, and/or HISC52H3).
5. Requirements #3 and #4 together must include at least one full credit dealing with periods prior to 1800 and one full credit dealing with periods after 1800, and at least one half credit on the art of Africa and Asia.
   - Courses dealing with periods after 1800: VPHB46H3, VPHB57H3, VPHB58H3, VPHB59H3, VPHB60H3, VPHC45H3, VPHC68H3, VPHC73H3, VPHD43H3, as well as (VPAC47H3) and (VPAC48H3).
   - Courses on the art of Africa: VPHB50H3, VPHB65H3
   - Courses on the art of Asia: VPHB73H3, VPHC54H3, and VPHD45H3.

Students interested in curatorial studies should include in their programs VPHB71H3, VPHB72H3, VPHC54H3, VPHC72H3, VPHD43H3, and VPHD44H3.

MINOR PROGRAM IN ART HISTORY (ARTS)
Undergraduate Advisor Email: art-history-program-supervisor@utsc.utoronto.ca

Program Requirements
Students must complete 4.0 full credits from the courses below as follows:
1. HUMA01H3 plus one half credit at the A-level in Art History.
2. VPHB39H3
3. 1.0 full credit at the B-level in Art History.
4. 1.5 full credits in Art History at the C- or D-level (which may include (VPAC47H3), (VPAC48H3), VPAC89H3, and/or HISC52H3).

VPHA46H3 Ways of Seeing: Introduction to Art Histories
How and why are objects defined as Art? How do these definitions vary across cultures and time periods? Studying different approaches to writing art history and considering a wide range of media from photography to printmaking and installation arts. Exclusion: (FAH100Y), FAH101H
Breadth Requirement: Arts, Literature & Language

VPHB39H3 Ten Key Words in Art History: Unpacking Methodology
Key concepts in art history, including intention, meaning, style, materiality, identity, production, reception, gender, visibility, and history. Students will explore critical questions such as whether and how to read artist's biographies into their art. This course helps students understand the discipline and develops critical thinking and research skills required in advanced courses.
Exclusion: FAH102H
Recommended Preparation: VPAA46H3
Breadth Requirement: Arts, Literature & Language

VPHB41H3 The Human Figure in Greek Art (8th - 4th Centuries B.C.)
A study of representations of men and women in sculpture and vase painting, two of the richest media in Greek art. This study reveals narratives of myth and legend, reflections of everyday life in Greece, and social values such as the perception of gender.
Corequisite: Any course in art history or VPAA05H3 or HUMA01H
Breadth Requirement: Arts, Literature & Language

VPHB42H3 Carolingian and Romanesque Art and Architecture
Major artistic and architectural monuments of Europe from the Carolingian renaissance to the renaissance of the twelfth century, considered in relation to geographical context, to monasticism and pilgrimage, to artistic developments of the contemporary Mediterranean world, and to the art and architecture of the later Roman Empire, Byzantium and Armenia, Islam and the art of the invasion period.
VPHB46H3 Paris: The Capital of the 19th Century: Impressionism and Post-Impressionism

Impressionist painting as a turning point in Western art, based in the rapidly expanding modernized city of Paris, "the capital of the nineteenth century," but ultimately turning to landscape as a major source of inspiration.
Exclusion: FAH346H, (FAH378H)
Breadth Requirement: Arts, Literature & Language

VPHB50H3 Africa Through the Photographic Lens

The centrality of photographic practice to African cultures and histories from the period of European imperialism, the rise of modernist "primitivism" and the birth of ethnology and anthropology to contemporary African artists living on the continent and abroad.
Prerequisite: None. Visual art studio students are encouraged to enrol.
Breadth Requirement: Arts, Literature & Language

VPHB52H3 Ancient Art and Architecture (ca. 900 B.C. - 300 A.D.)

The artistic achievements of Greece and Rome. This course examines Greek architectural design with its concerns for ideal proportion and balance; Roman technical innovations; and Classical painting and sculpture and their enormously influential techniques for creating illusions of the real world.
Prerequisite: VPHA46H3 recommended
Exclusion: (FAH205H), FAH207H
Breadth Requirement: Arts, Literature & Language

VPHB53H3 Medieval Art

The origins of European artistic traditions in the early Christian, Mediterranean world; how these traditions were influenced by classical, Byzantine, Moslem and pagan forms; how they developed in an entirely new form of artistic expression in the high Middle Ages; and how they led on to the Renaissance.
Exclusion: FAH216H, (FAH261H)
Recommended Preparation: VPHA46H3
Breadth Requirement: Arts, Literature & Language

VPHB57H3 Women in the Arts: Hot Mamas, Amazons, and Madonnas

Women artists of the last 150 years, their relationships to "mainstream" art, and the influences of feminism on the production and reception of art.
Prerequisite: [WSTA01H3 & [WSTA03H3 or (WSTA02H3)] or VPHA46H3.
Exclusion: VIS209H
Breadth Requirement: Arts, Literature & Language

VPHB58H3 Modern Art and Culture

Nineteenth and twentieth century art in relation to the modern world. What 'modern' means when used to describe art, and how art is affected by the dynamic cultural, economic, social, and political contexts of the modern world.
Exclusion: FAH246H1, (FAH287H), (FAH288H)
Breadth Requirement: Arts, Literature & Language

VPHB59H3 Current Art Practices

Shifts in theory and practice in art of the past fifty years.

Studying selected artists' works from around the world, we explore how notions of modern art gave way to new ideas about media, patterns of practice, and the relations of art and artists to the public, to their institutional contexts, and to globalized cultures.
Exclusion: (FAH289H)
Breadth Requirement: Arts, Literature & Language

VPHB60H3 Canadian Visual Art

What Canadian artists have made in the country's diverse cultural contexts, from 18th century churches of Québec, designed and decorated by talented family studios, to First Nations art and major twentieth century Anglo-Canadian and Québécois painters.
Exclusion: FAH248H, (VPHB47H3)
Breadth Requirement: Arts, Literature & Language

VPHB61H3 Space, Place and the Arts

Artist David Hockney has said that the way we define space has a lot to do with how we behave in it. Here we examine different ideas and assumptions about space and place and perspective in painting, performance, installation and other arts, and what these may communicate to us.
Exclusion: FAH390H, FAH390Y
Breadth Requirement: Arts, Literature & Language

VPHB63H3 Fame, Glory and Spectacle: 14th-16th Century Art in Italy

This course is an introduction to art and visual culture produced in Italy ca. 1350-1550. Students will explore new artistic media and techniques, along with critical issues of social, cultural, intellectual, theoretical and religious contexts that shaped the form and function of art made during this era.
Prerequisite: VPHA46H3
Exclusion: FAH230H, FAH274H
Breadth Requirement: Arts, Literature & Language

VPHB64H3 Baroque Visions

This course introduces the art and culture of 17th century Europe and its colonies. Art of the Baroque era offers rich opportunities for investigations of human exploration in geographic, spiritual, intellectual and political realms. We will also consider the development of the artist and new specializations in subject and media.
Prerequisite: VPHA46H3
Exclusion: FAH231H, FAH279H
Breadth Requirement: Arts, Literature & Language

VPHB65H3 Exhibiting Africa: Spectacle and the Politics of Representation

Students will read critical texts on the politics of representation, postcolonialism, museology, and institutional critique to apply to the histories of exhibition and reproduction of African arts, in particular, and the arts of non-Western cultures in general.
Prerequisite: VPHA46H3 or AFSA01H3
Breadth Requirement: Arts, Literature & Language

VPHB67H3 Religion in the Arts: Buddhist Arts and Cultures

This course will serve as an introduction to the field of Buddhist art historiography, with an emphasis on the relationships between visual arts, Buddhist philosophy and religion, and the cultural manifestations of the faith and its arts across the world. The classes will take advantage of
collections at the ROM.
Same as GASB67H3
Exclusion: GASB67H3
Breadth Requirement: Arts, Literature & Language

VPHB68H3 Art and the Everyday: Mass Culture and the
Visual Arts
This course explores the relationship between visuality and
daily life. It looks at the interaction of the
economic, political and aesthetic aspects of mass media with
the realm of "fine" arts across history and cultures. We will
explore the meaning of the public, the mass, and the simulacrum.
Breadth Requirement: Arts, Literature & Language

VPHB70H3 Images of Women: East Asian Visual Culture
Images of women in East Asia both provoked and became
products of changing ideas of tradition, history and nation.
Covering a wide variety of media, including painting, prints,
photography, and film, this course examines the role of
gender images in politics, the impact of imagery on daily
experience, and the relationships among artist, image and
viewer.
Same as GASB70H3
Prerequisite: VPHA46H3, GAS01H3, or WSTA01H3
Exclusion: VCC302H, VCC304H, GASB70H3
Breadth Requirement: Arts, Literature & Language

VPHB71H3 Exhibiting Art
A critical look at ways of exhibiting art, from a variety of
international, historical and contemporary perspectives with
emphasis on today's displays in public and private
institutions, and on beyond-the-gallery installation,
performance, and virtual art practices.
Prerequisite: VPHA46H3
Breadth Requirement: Arts, Literature & Language

VPHB72H3 Museum and Curatorial Practice: Theoretical
and Ethical
This course will introduce students to the theoretical
contexts of museum practices and explore the ethics of
curatorial practice. Students will investigate interpretations of
sensitive material, including historical, cultural and religious
artworks, and examine case studies of problematic challenges
to curatorial responsibilities.
Prerequisite: VPHA46H3
Breadth Requirement: Arts, Literature & Language

VPHB73H Visualizing Asia
A survey of the art of China, Japan, Korea, India, and
Southeast Asia. We will examine a wide range of artistic
production, including ritual objects, painting, calligraphy,
ar ts, sculpture, textiles, and prints. Special attention
will be given to social contexts, belief systems, and
interregional exchanges.
Same as GASB73H3
Prerequisite: VPAA01H3, VPHA46H3 or GAS01H3
Exclusion: GASB73H3, FAH261H
Breadth Requirement: Arts, Literature & Language

VPHB74H3 Art in Early Modern Europe: Renaissances
Outside of Italy
This course explores the rich visual culture produced in
northern and central Europe 1400-1600. Topics such as the
rise of print culture, religious conflict, artistic identity,
contacts with other cultures and the development of the art
market will be explored in conjunction with new artistic
techniques, styles and materials.
Exclusion: FAH230H, FAH274H
Recommended Preparation: VPAA46H3
Breadth Requirement: Arts, Literature & Language

VPHB75H3 Religion in the Arts: Hinduism and Jainism
This course explores Eastern religions and artworks, with a
specific focus on Hinduism and Jainism in art from India,
Pakistan and Sri Lanka. Investigation of context, use, and
symbolism, paralleled with the examination of rituals, beliefs
and performance. The classes will take advantage of
collections at the ROM.
Same as GASB75H3
Exclusion: (VPHB56H3), (VPHC55H3), GASB75H3
Recommended Preparation: VPHA46H3 or RLGA01H3 or
RLGB02H3 or HISB57H3 or GAS01H3
Breadth Requirement: Arts, Literature & Language

VPHB76H3 Religion in the Arts: The Judeo-Christian
Traditions
This course will address how arts give expression to
spiritual beliefs and reflect patronage and iconographic
debates operating across the cultures of the Judeo-Christian
worlds. Investigation of context, use, and symbolism,
paralleled with the examination of rituals and beliefs. The
classes will take advantage of collections at the ROM and the
AGO.
Exclusion: (VPHB56H3), (VPHC56H3)
Recommended Preparation: VPHA46H3 or RLGA02H3
Breadth Requirement: Arts, Literature & Language

VPHC42H3 Gothic Architecture
Current scholarship is expanding and challenging how we
dece “what is Gothic?” We will examine a variety of
buildings, considering artistic culture, social, cultural, and
physical contexts as well. Style, building techniques,
patronage, location in time and space, and importance of
decoration (sculpture, stained glass, painting, tapestry) will be
among topics discussed.
Prerequisite: One credit in art history at the B-level
Exclusion: FAH328H, FAH351H (UTM only), (FAH369H)
Breadth Requirement: Arts, Literature & Language

VPHC45H3 Seminar in Modern and Contemporary Art
Special topics in twentieth-century painting and sculpture.
The subject will change from time to time. After introductory
sessions outlining the subject and ways of getting information
about it, seminar members will research and present topics of
their choice.
Prerequisite: 1.0 credit in modern art history at the B-level
Breadth Requirement: Arts, Literature & Language

VPHC46H3 Topics in Art of the Ancient World
A special topics course in ancient art and architecture.
Concentrated study of a particular topic in ancient art, which
will change from year to year.
Prerequisite: VPHB52H3
Breadth Requirement: Arts, Literature & Language

VPHC49H3 Advanced Studies in Art Theory
The class will read selected recent cultural theory and art
theory and consider its implications for a variety of works of
art, and will investigate selected exhibition critiques and the
critical discourse surrounding the oeuvres of individual artists.
Prerequisite: VPHA46H3 & [VPAB05H3 or (VPAB06H3)]
Corequisite: 2.0 credits at the B-level in art history and/or studio
Breadth Requirement: Arts, Literature & Language

VPHC51H3 Word and Image
The interface between modern and contemporary arts and the communicative power of language, the written word and graphic systems. By examining the long-standing, cross cultural links between the verbal and the visual, we will consider how artists combine narrative content and graphic designs of letters, words and conventional and invented inscriptions.
Prerequisite: One B-level course in art history
Breadth Requirement: Arts, Literature & Language

VPHC53H3 The Silk Routes
The Silk Routes were a lacing of highways connecting Central, South and East Asia and Europe. Utilizing the Royal Ontario Museum's collections, classes held at the Museum and U of T Scarborough will focus on the art produced along the Silk Routes in 7th to 9th century Afghanistan, India, China and the Taklamakhan regions.
Same as GASC53H3
Prerequisite: 1.0 credit in art history or in Asian or medieval European history
Exclusion: GASC53H3
Breadth Requirement: Arts, Literature & Language

VPHC54H3 Art Writing
Art criticism as a complex set of practices performed not only by critics, art historians, curators and the like, but also by artists (and collectors). The traditional role of art critics in the shaping of an art world, and the parallel roles played by other forms of writing about art and culture (from anthropology, sociology, film studies).
Prerequisite: 2.0 full credits at the B-level from VPA, VPH, and/or VPS
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

VPHC63H3 Explorations in Early Modern Art
This seminar-format course will offer students the opportunity to investigate critical theories and methodologies of the early modern period (roughly 1400-1700). Focusing on such topics as a single artist, artwork or theme, students will become immersed in an interdisciplinary study that draws on impressive local materials from public museum and library collections.
Prerequisite: VPHA46H3 & [one of VPHB63H3 or VPHB64H3 or VPHB74H3]
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPHC68H3 Art in Global Cities
This course looks at the global city as a hub for the creation of visual, performing arts and architecture. How have cyberspace and increased transnational flows of art and artists changed the dynamic surrounding urban arts? What are the differences between the arts within the modern and global contemporary city?
Prerequisite: VPHB58H3 or VPHB59H3

VPHC72H3 Art, the Museum, and the Gallery
Art and the settings in which it is seen in cities today. Some mandatory classes to be held in Toronto museums and galleries, giving direct insight into current exhibition practices and their effects on viewer's experiences of art; students must be prepared to attend these classes.
Prerequisite: VPHB71H3 & VPHB72H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPHC73H3 Home, Away and In Between: Artists, Art, and Identity
The interplay among visual, performing and literary arts and experience of exile, diaspora, displacement and placemaking: how the nomadic, transitional nature of today's world influences contemporary artists' practices. Readings from art history, visual anthropology, cultural studies, ethnic studies and literary criticism. Considerations of memory, autobiography, community and liminality in relation to experiences of local Canadian artists.
Exclusion: (VPAB09H3)
Breadth Requirement: Social & Behavioural Sciences

VPHC74H3 A Tale of Three Cities: Introduction to Contemporary Art in China
An introduction to Chinese contemporary art focusing on three cities: Beijing, Shanghai, and Guangzhou. Increasing globalization and China's persistent self-renovation has brought radical changes to cities, a subject of fascination for contemporary artists.
The art works will be analyzed in relation to critical issues such as globalization and urban change.
Same as GASC74H3
Prerequisite: 2 full credits at the B-level in Art History, Asian History, and/or Global Asia Studies, including at least one of VPHB39H3, VPHB73H3, HISB58H3, GASB31H3, GASB33H3, or GASB35H3.
Exclusion: GASC74H3
Breadth Requirement: Arts, Literature & Language

VPHD41H3
VPHD42Y3 Supervised Reading in Art History
A course offering the opportunity for advanced investigation of an area of interest; for students who are nearing completion of art history programs and who have already acquired independent research skills. Students must locate a willing supervisor and topics must be identified and approved by the end of the previous term.
Prerequisite: 1.0 credit at the C-level in art history. Students are advised that they must obtain consent from the supervising instructor before registering for these courses

VPHD43H3 Curating Contemporary Art
Curatorial practice and the responsibilities of the curator, such as the intellectual and practical tasks of producing a contemporary art exhibition, researching Canadian contemporary art and artists, building a permanent collection, administrating a public art competition, and critical writing about works of visual art in their various contexts. Studio and/or gallery visits required.
Prerequisite: 11.0 credits including VPHB39H3, VPHB71H3 & VPHB72H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPHD44H3 Curating Historical Art
Time and history bring different factors to our understanding and interpretation of artworks. Students will explore both intellectual and practical factors concerning curating historical art, from conservation, research, and handling issues to importance of provenance, collecting, and display, through workshops, critical writing and discussion, field trips, and guest speakers.
Prerequisite: 11.0 credits including VPHB39H3 & VPHB71H3 & VPHB72H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPHD45H3 Seminar in Art and Anthropology
This seminar will address the entanglement of art, historical, and anthropological approaches to objects, images, creativity, and interpretation. Looking at the power of images within societies, we will consider the role of the artist/maker, the identity of the audience/viewer, and the challenges of interpreting through cross cultural, transhistorical frameworks.
Prerequisite: Any 11.0 credits including VPHA46H3 & VPHB39H3

VPHD46H3 Visual Encounter: The Meeting of Eastern and Western Art
This course explores the cultural construction of vision with a particular focus on the encounters between two cultural systems: Euro-American and East Asian. The collision of West and East yielded dramatic results in the realm of visual culture, altering the ways of seeing.
Same as GASD46H3
Prerequisite: 11.0 credits, including at least one of VPHB39H3, VPHB73H3, HISB58H3, GASB31H3, GASB33H3, or GASB35H3 & a further 1.5 full credits at the B- or C-level in Art History, Asian History, and/or Global Asia Studies Exclusion: GASD46H3, FAH368H
Breadth Requirement: Arts, Literature & Language

Arts Management

SPECIALIST PROGRAM IN ARTS MANAGEMENT (ARTS)
Program Director: S.L. Helwig (416-287-7160) Email: arts-management-program-director@utsc.utoronto.ca

Arts Management is designed for students with an interest both in the arts and in the business of the arts, primarily from a not-for-profit perspective. It provides students with a solid grounding in the knowledge and skills necessary for fulfilling professional careers in producing, presenting and exhibiting organizations (theatres, opera companies, orchestras, dance companies, galleries, museums), arts councils, arts service organizations, government, and many other related areas, or for graduate studies in disciplines such as Arts Management, Cultural and Public Policy, and Museum or Curatorial Studies. For further information, see www.utsc.utoronto.ca/artsmanagement/

Program Admission: Enrolment in the program is limited and entry is competitive.
Admissions are granted on the basis of applicants' academic performance, background in one or more of the arts, and demonstrated interest and potential ability in Arts Management.

Program Requirements: Students complete seven full credits in the arts management core program, two full credits in the management field, and six to eight full credits from one or two related field(s), and must maintain a minimum 2.0 cumulative grade point average. Continuous consultation with the Program Director is strongly encouraged for all students in each year of their program.

1. Arts Management Core Courses
Students must complete seven full credits as follows:
a. The following five full credits:
   VPAA10H3 Introduction to Arts Management
   VPAA12H3 Audience and Resource Development
   VPPA06H3 Visual and Performing Arts Management in the Digital Age
   VPAB05H3 Introduction to Contemporary Cultural Theory
   VPAB07H3 Equity & Diversity in Arts Organizations
   VPAB13H3 Financial Management for Arts Managers
   VPAB16H3 Managing and Leading in Cultural Organizations
   VPAC13H3 Planning and Project Management in the Arts and Cultural Sector
   VPAC15H3 Cultural Policy
   VPAD12H3 Senior Seminar in Arts Management
b. One half credit from the following list:
   VPAC17H3 Arts Marketing
   VPAC18H3 Fundraising and Development in the Arts
c. One half credit from the following list:
   VPAC19H3 Performing Arts Management: Principles and Practices
   VPAC20H3 Visual Arts Management: Principles and Practices
d. One full credit from the following list:
   VPAB15H3 Arts Education and Outreach
   VPAC16H3 Legal and Human Resource Issues in Arts Management
   VPAC21H3 Special Topics in Arts Management I
   VPAC22H3 Special Topics in Arts Management II
   VPAD07H3 Agency & Pluralism in Social & Cultural Transformations
   VPAD14H3 Independent Studies in Arts Management

2. Management Field of Study
   The following two full credits are required:
   a. MGTA03H3 Introduction to Management I
   b. MGTA04H3 Introduction to Management II
   c. Plus one additional full credit from Management or Economics (normally at the C level).
      Note: Arts Management students have access to the following Management courses directly via ROSI: MGTB23H3, MGTB29H3, MGTC33H3, MGTC44H3 & MGTD45H3. Arts Management students interested in other Management courses must approach the Arts Management Program Director before or very early in the enrolment period to discuss suitability and to request access. Prerequisite knowledge is required for these courses.

3. Related Field(s) of Study
   Six to eight full credits, including at least one half credit at the C- or D-level, from one or two related fields of study. These courses must:
   a. Consist of six full credits of those credits required within the Major program in one of the artistic disciplines within Visual and Performing Arts (Art History, Music, Studio and Theatre & Performance Studies). Students choosing this option may wish to take one-two additional credits necessary to complete the Major program in place of unrelated elective courses. or
   b. Consist of the eight full credits required of two Minor programs, at least one of which must be in a Visual and Performing Arts artistic discipline. The completion of a Major program in a chosen artistic field is particularly valuable for students contemplating graduate studies; additional areas of studies (offered by the double Minor option) may be valuable in certain fields of work and further studies.
   Depending on the option chosen in 3 above (Related Field(s) of Study) students require a further three to five full credits in order to meet the Honours B.A. requirement of twenty credits. Arts Management students are encouraged to use these credits to take courses outside their area(s) of concentration in order to broaden their understanding of contemporary issues and their historical context, to enhance their communication skills and to fulfill the breadth requirements. Arts Management courses that are not chosen to fulfill requirements in 1b, 1c and 1d above may be taken as electives.

Courses in the first two years of the program
The first year of study would normally consist of five full credits (10 courses - five in each of two sessions) including VPAA10H3, VPAA12H3, MGTA03H3, MGTA04H3, at least three courses from the related field(s) of study (including HUMA01H3), and electives (preferably including HUMA02H3). The second year of study would normally consist of five full credits to include VPAB05H3, VPAB16H3, possibly VPAB07H3 & VPAB13H3, and courses in the related field(s) of study.

SPECIALIST (CO-OPERATIVE) PROGRAM IN ARTS MANAGEMENT (ARTS)
Program Director: S.L. Helwig (416-287-7160) Email: arts-management-program-director@utsc.utoronto.ca
Co-op Contact: acme@utsc.utoronto.ca

The Co-operative Program in Arts Management is designed for students with an interest both in the arts and in the business of the arts, primarily from a not-for-profit perspective, and normally requires four to five years to complete. It combines academic study in a wide variety of subjects with practical work experience, preparing students with a solid grounding in the knowledge and skills necessary for fulfilling professional careers in producing, presenting and exhibiting organizations (theatres, opera companies, orchestras, dance companies, galleries, museums), arts councils, arts service organizations, government, and many other related areas, or for graduate studies in disciplines such as Arts Management, Cultural and Public Policy, and Museum or Curatorial Studies. For further information, see www.utsc.utoronto.ca/artsmanagement/.

For information related specifically to the co-op aspects of the Program please contact acme@utsc.utoronto.ca

Note: For information on the Co-operative Program in Humanities or the Management Programs which operate separately from the Specialist (Co-operative) Program in Arts Management, please see the Humanities and Social Sciences Co-operative Program or the Management sections of this Calendar respectively.

Program Admission: Enrolment in the program is limited and entry is competitive. Admissions are granted on the basis of applicants' academic performance, background in one or more of the arts, and demonstrated interest and potential ability in Arts Management.

Program Requirements: Co-op students follow the course requirements specified above for the Specialist Program in Arts Management, plus additional orientation and preparatory activities and internships/work placements.
Courses in the first two years of the program
The first year of study would normally consist of five full credits (10 courses - five in each of two sessions) including VPAA10H3, VPAA12H3, MGTA03H3, MGTA04H3, at least three courses from the related field(s) of study (including HUMA01H3), and electives (preferably including HUMA02H3), plus additional co-op related activities. The second year of study would normally consist of five full credits to include VPAB05H3, VPAB16H3, possibly VPAB07H3 & VPAB13H3, and courses in the related field(s) of study, and additional co-op related activities in preparation for the first work placement.

Internships/ Work Placements
Placements with arts and related organizations- where students can apply their learning in real-world situations- are an integral part of this Program. To be eligible for their placement, students must be in good standing in the Program (with a minimum 2.5 cumulative grade point average) and have completed at least 9.0 full credits including:

- Two full credits from Art History, Music, Studio or Theatre & Performance Studies
- VPAA10H3 Introduction to Arts Management
- VPAA12H3 Audience and Resource Development [or (VPAB12H3) & (VPAB14H3)]
- MGTA03H3 Introduction to Management I
- MGTA04H3 Introduction to Management II

Students must also successfully complete required orientation and preparatory activities prior to their first placement. To be eligible for a subsequent placement, students must be in good standing in the Program (with a minimum 2.5 Cumulative Grade Point Average), and have successfully completed previous placement(s) with satisfactory evaluations from both the placement and faculty supervisors.

VPA06H3 Visual and Performing Arts Management in the Digital Age
An introduction to the use of computers in the visual and performing arts. Demonstrations, workshops and an introductory survey of applications and usage will illustrate current standards, and consider future possibilities of the handling of information (including text, images, sound, and data). Projects will allow opportunities for practical experience.

Exclusion: (CSCA02H3)
Recommended Preparation: VPAA10H3
Enrolment Limit: 40. Priority will be given to students in Arts Management, then other ACM programs (Arts, Culture & Media Programs), and Humanities and Social Sciences (Co-op)
Breadth Requirement: Arts, Literature & Language

VPA10H3 Introduction to Arts Management
An introduction to the theories and practices of arts management primarily within the not-for-profit sector. It is a general survey course that will introduce the broad context of arts in Canadian society and provide an overview of the artistic and administrative issues currently faced by the arts and cultural community.

Breadth Requirement: Arts, Literature & Language

VPA12H3 Audience and Resource Development
An introduction to the essential and interconnected areas of marketing and fundraising in the arts.
Prerequisite: VPAA10H3
Exclusion: (VPAB12H3), (VPAB14H3)
Breadth Requirement: Arts, Literature & Language

VPAB05H3 Introduction to Contemporary Cultural Theory
An introduction to key concepts and issues in contemporary cultural theory. Emphasizes critical reading, thinking, and writing. Students will engage with a wide range of theoretical and methodological developments in the study of art and culture, including, cultural studies, feminism, and postmodernism.
Prerequisite: 4.0 credits, including VPAA10H3
Breadth Requirement: History, Philosophy & Cultural Studies

VPAB07H3 Equity and Diversity in Arts Organizations
The importance of equity and diversity within Canadian cultural values, and how these challenges are advanced within arts organizations. The development and use of critical tools to assess the values, principles, and policies of arts organizations, and strategies aimed at changing these organizations so that they are non-discriminatory and inclusive.
Prerequisite: 4.0 full credits, including VPAA10H3
Exclusion: (VPAD06H3)
Recommended Preparation: VPAB05H3
Breadth Requirement: Social & Behavioural Sciences

VPAB13H3 Financial Management for Arts Managers
An introduction to financial management issues faced by arts and cultural managers. The topics include an introduction to basic accounting concepts, financial statement preparation and analysis, internal control and management information systems, budgeting and programming, cash and resource management, and various tax-related issues.
Prerequisite: VPAA10H3 Exclusion: MGTB03H3
Recommended Preparation: VPAA12H3 or (VPAB12H3) and (VPAB14H3)
Breadth Requirement: Social & Behavioural Sciences

VPAB15H3 Arts Education and Outreach
An introduction to public programming, community arts, and education within the arts organization and beyond. This course will consider the practical and the broader historical, social and policy issues related to the relationship between arts programming and audiences.
Prerequisite: At least 4.0 credits including VPAA10H3
Breadth Requirement: History, Philosophy & Cultural Studies

VPAB16H3 Managing and Leading in Cultural Organizations
An introduction to the theories and practice of leadership, employee and volunteer management, and organizational behaviour as they apply to the not-for-profit arts sector.
Prerequisite: VPAA10H3
Recommended Preparation: VPAA12H3 or (VPAB12H3) or (VPAB14H3)
Breadth Requirement: Arts, Literature & Language
VPAC13H3 Planning and Project Management in the Arts and Cultural Sector
This course provides a broad foundation of project management and planning knowledge and skills. Topics such as project and special event management (including tours, festivals, etc.), and strategic and business planning (including entrepreneurship) will be discussed in the context of organizational processes.
Prerequisite: 8.0 credits including, VPAB13H3 & [VPAB16H3 or MGTB23H3]
Breadth Requirement: Arts, Literature & Language

VPAC15H3 Cultural Policy
A survey of the principles, structures and patterns of cultural policy and arts funding, both nationally and internationally. The course will explore a wide range of cultural policy issues, addressing both the subsidized arts and cultural industries sectors, and exploring the strengths and weaknesses of particular policy approaches.
Prerequisite: 8.0 credits, including VPAA10H3 & VPAB05H3
Breadth Requirement: Arts, Literature & Language
*Pending Governance Approval, please see the Online Calendar for the final copy.

VPAC16H3 Legal and Human Resources Issues in Arts Management
This course is a study of legal and practical human resource issues from an arts management perspective. Topics will include copyright, freedom of expression, censorship, and issues related to labour relations and contracts in the cultural sector.
Prerequisite: 8.0 credits including VPAA10H3
Enrolment Limits: 30
Breadth Requirement: Arts, Literature & Language

VPAC17H3 Arts Marketing
An advanced study of marketing within the arts and cultural sector. This course facilitates a sophisticated understanding of the knowledge and skills required for an arts manager to be responsive to varied market groups and changing market environments and successfully bring art and audiences together.
Prerequisite: VPAA10H3 & [VPAA12H3 & (VPAB12H3)]
Breadth Requirement: Arts, Literature & Language

VPAC18H3 Fundraising and Development in the Arts
An advanced study of fundraising and resource development within the arts and cultural sector. This course facilitates a sophisticated understanding of the knowledge and skills required for an arts manager to develop and increase contributed revenue to support the artistic mission of cultural organizations.
Prerequisite: VPAA10H3 & [(VPAA12H3 & VPAB16H3) or (VPAB14H3)]
Breadth Requirement: Arts, Literature & Language

VPAC19H3 Performing Arts Management: Principles and Practices
An advanced investigation of arts management practice within theatre, music and other live performing arts organizations. This course will allow students to develop discipline-specific knowledge and skills and apply foundational knowledge to an understanding of the unique needs of this sector.
Prerequisite: VPAA10H3 & at least 2 full credits in Music or Theatre and Performance Studies & VPAA12H3
Breadth Requirement: Arts, Literature & Language

VPAC20H3 Visual Arts Management: Principles and Practices
An advanced investigation of arts management practice within Canadian art galleries, museums and heritage institutions. This course will allow students to build on foundational studies and develop discipline-specific knowledge and skills through experiential methods and objective study.
Prerequisite: VPAA10H3 & at least 2 full credits in Studio or Art History & [VPAA12H3 or enrolment in Curatorial Studies]
Breadth Requirement: Arts, Literature & Language

VPAC21H3 Special Topics in Arts Management I
Special topics for intensive practical, theoretical and/or experiential study of some specific aspects of Arts Management. The topic(s) to be explored in this course will change from session to session.
Prerequisite: 10.0 credits, including VPAA10H3, VPAA12H3, and VPAB16H3.
Exclusion: (VPAD13H3)
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

VPAC22H3 Special Topics in Arts Management II
Special topics for intensive practical, theoretical and/or experiential study of some specific aspects of Arts Management. The topic(s) to be explored in this course will change from session to session.
Prerequisite: 10.0 credits, including VPAA10H3, VPAA12H3, and VPAB16H3
Enrolment Limits: 25
Breadth Requirement: Arts, Literature & Language

VPAD12H3 Senior Seminar in Arts Management
A capstone course providing the opportunity for students to reflect on and synthesize the knowledge and skills gained in previous courses and related experiences.
Prerequisite: At least 16.0 full credits including VPAC13H3.

VPAD14H3 Independent Studies in Arts Management
A directed research and/or project-oriented course for students who have demonstrated a high level of academic maturity and competence. Qualified students will have the opportunity to investigate an area of interest to both student and supervisor in traditional or emerging subjects related to the field of Arts Management.
Prerequisite: At least 1 full credit in Arts Management at the C-level. Written consent and approval of a formal proposal in the approved format must be obtained from the supervising instructor and the Program Director by the last date of classes in the previous academic session.
Exclusion: MGTD80H3
Enrolment Limits: 6
The Music and Culture programs are designed to engage students interested in enriching their knowledge of musical cultures past and present, and deepening their understanding of music as a part of human experience, across historical periods and within different social and cultural contexts. We offer courses in classical, world, and popular music, focused on history/culture, theory/composition, and performance. Programs provide students with a broad knowledge of current directions in the field, and a critical grasp of music's role in society and culture, from local communities to global perspectives.

Guidelines for course selection: Music studies normally begin with VPMA79H3, VPMA80H3, and VPMA90H3, which serve as the prerequisites for more advanced courses in all areas. These core music program courses are designed for students with RCM Grade II Rudiments or equivalent competence (fluency in reading music notation and tonal music rudiments). Incoming students must register in the course appropriate to their level of musical training, based on the results of an online music placement test. The placement test is MANDATORY for all students who register for the first time in VPMA79H3, VPMA89H3, and VPMA90H3, and should be completed before the beginning of classes in September. Any students who are not admissible into the initial program courses VPMA79H3 and VPMA90H3 on the basis of their placement test results will be advised to take VPMA89H3 as a preparation for future program study. Students should complete the online placement test, and then register in the appropriate level of course according to the results specified by the test. Enrolment status in VPMA79H3, VPMA89H3, and VPMA90H3 will show as INT until placement results are confirmed in September. Students who register for these courses without completing the test will be deregistered. Please see the Humanities Music webpage for details and a link to the online placement test: www.utsc.utoronto.ca/~humdiv/prg_mc.html

Note: that students should take VPMA79H3, VPMA80H3 and VPMA90H3 within the first year of program study, and that the core music program courses must be taken in appropriate sequence. Normally, an A-level VPM course should not be taken at the same time as, or after, a B-level VPM course. Please do not hesitate to consult Program Supervisors and other faculty members for further advice about course selection and Programs.

Performance Courses
The following performance courses are available to all qualified faculty, staff and students, some on a non-credit basis. Entrance is by interview/audition held during Orientation or the first week of classes in Fall and Winter sessions. Details are posted on the bulletin board outside AA-303 Music Studio and on the web Study Guide. Credit students should register for the course, but will be admitted only upon successful completion of the interview/audition.

- VPMA70H3 Vocal Ensemble Ia
- VPMA71H3 Vocal Ensemble Ib
- VPMB70H3 Vocal Ensemble Iia
- VPMB71H3 Vocal Ensemble Iib
- VPMC70H3 Vocal Ensemble IIIa
- VPMC71H3 Vocal Ensemble IIIb

There are two separate groups available under Vocal Ensemble. They are identified in the timetable and elsewhere by section numbers as follows:

- Concert Choir - Section 01, Jazz Choir - Section 02.
- VPMA73H3 Instrumental Ensemble Ia
- VPMA74H3 Instrumental Ensemble Ib
- VPMB73H3 Instrumental Ensemble Iia
- VPMB74H3 Instrumental Ensemble Iib
- VPMC73H3 Instrumental Ensemble IIIa
- VPMC74H3 Instrumental Ensemble IIIb

There are four separate groups available under Instrumental Ensemble. They are identified in the timetable and elsewhere by section numbers as follows: Concert Band - Section 01, String Ensemble - Section 02, Flute Choir - Section 03, Jazz Band - Section 30.

General Interest Courses

Major and Minor Program Courses
The three core B-level courses, VPMB80H3, VPMB82H3, cycle frequently during the three academic sessions. C-level courses are offered on a three-year rotational cycle during the F and W sessions only. A-level and C-level Materials of Music courses are normally offered in the Fall session only; B-level Materials is normally offered in the Winter session.

MAJOR PROGRAM IN MUSIC AND CULTURE (ARTS)
Undergraduate Advisor Email: music-program-supervisor@utsc.utoronto.ca
Program Requirements
Students are required to complete eight (8.0) credits as follows:

1. HUMA01H3 Exploring Key Questions in Humanities
   VPMA79H3 Introduction to Music and Culture I
   VPMA80H3 Introduction to Music and Culture II
   VPMA90H3 Materials of Music I
   VPMA99H3 Music of the World's Peoples
   VPMB90H3 Materials of Music II
2. One and one-half (1.5) credits from the sequence VPMB80H3 to VPMB82H3.
3. One half (0.5) credit chosen from the following courses:
   VPMB65H3 Music and Healing
   VPMB75H3 Music in Islamic Cultures
   VPMB77H3 Music in Religion and Ritual
   VPMB78H3 Balinese Gamelan: Performance and Context
   VPMB79H3 Performing Arts of Asia
4. Two (2.0) credits chosen from VPAC89H3 and the sequence VPMC80H3 to VPMC97H3. Qualified students may substitute one half credit from VPMD80H3-VPMD81H3. Depending on the topic, IEEC71H3 or IEEC81H3 may also be substituted with the permission of the program supervisor.
5. One (1.0) full credit in Performance. Students must choose the graded option for this credit.

MINOR PROGRAM IN MUSIC AND CULTURE (ARTS)
Undergraduate Advisor Email: music-program-advisor@utsc.utoronto.ca

Program Requirements
Students are required to complete 4.0 full credits as follows:

1. VPMA79H3 Introduction to Music and Culture I
   VPMA80H3 Introduction to Music and Culture II
   VPMA90H3 Materials of Music I
   VPMA99H3 Music of the World's Peoples
2. 1.0 credit from the sequence VPMB80H3 to VPMB82H3
3. 1.0 credit chosen from VPAC89H3 and the sequence VPMC80H3 to VPMC97H3. Depending on topic, IEEC71H3 or IEEC81H3 may also be substituted with the permission of the program supervisor.

VPMA69H3 Chamber Music I
The practical study of small ensemble performance through chamber music repertoire, including public presentations and group recitals. Audition/interview required.
Breadth Requirement: Arts, Literature & Language

VPMA70H3 Vocal Ensemble Ia
The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz Choir (Section 02). Audition/Interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Breadth Requirement: Arts, Literature & Language

VPMA71H3 Vocal Ensemble Ib
A continuation of VPMA70H3. The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz Choir (Section 02). Audition/Interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMA70H3
Breadth Requirement: Arts, Literature & Language

VPMA73H3 Instrumental Ensemble Ia
The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Exclusion: (VPMA92H3)
Breadth Requirement: Arts, Literature & Language

VPMA74H3 Instrumental Ensemble Ib
A continuation of VPMA73H3. The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMA73H3 Exclusion: (VPMA92H3)
Breadth Requirement: Arts, Literature & Language

VPMA79H3 Introduction to Music and Culture I
A study of the basic materials, principles of design, and cultural significance of Western music, preparing students for further studies in music at the university level. Online music
placement test required. Students are normally expected to complete VPMA79H3 and VPMA80H3 in the same academic year.
Prerequisite: Royal Conservatory of Music Grade II Rudiments or equivalent; online music placement test required.
Breadth Requirement: History, Philosophy & Cultural Studies

**VPMA80H3 Introduction to Music and Culture II**
A continuation of VPMA79H3 (Introduction to Music and Culture I). Students are normally expected to complete VPMA79H3 and VPMA80H3 in the same academic year.
Prerequisite: VPMA79H3
Breadth Requirement: History, Philosophy & Cultural Studies

**VPMA89H3 The Language of Music**
This course develops students' understanding of the elements of Western tonal music, emphasizing the ability to recognize sound structures and to read and write them in musical notation. It prepares students for study in the music major and minor programs and provides foundations for a wide range of musical activities.
Prerequisite: Online music placement test required.
Breadth Requirement: Arts, Literature & Language

**VPMA90H3 Materials of Music I**
The basic materials of music from the Middle Ages to the present, including elementary harmony, musical forms, introductory analytical and compositional techniques and aural training. Online music placement test required.
Prerequisite: Royal Conservatory Grade II Rudiments or equivalent; online music placement test required.
Breadth Requirement: Arts, Literature & Language

**VPMA93H3 Listening to Music**
An introduction to the language of music for non-musicians through a survey of musical styles, genres and development of intelligent listening skills. No previous musical experience is necessary.
Exclusion: VPMA93H3 may not be taken after or concurrently with VPMA79H3 or VPMA80H3.
Breadth Requirement: History, Philosophy & Cultural Studies

**VPMA95H3 Elementary Musicianship I**
A practical introduction to musicianship and music rudiments through the development of basic vocal or instrumental techniques and an emphasis on aural skills.
Breadth Requirement: Arts, Literature & Language

**VPMA99H3 Music of the World's Peoples**
An introduction to music from different parts of the world, including folk, popular, religious and classical traditions. This course aims to help students appreciate and understand music as a global phenomenon, and its important role in social and cultural life. Audio-visual materials feature prominently. No previous musical experience is necessary.
Exclusion: MUS200H
Breadth Requirement: Social & Behavioural Sciences

**VPMB65H3 Music and Healing**
From antiquity to the present day and across the globe, music is used as a means of curing illness. This course will examine music's unique power to restore physical and mental health, both in Western medicine and in more traditional global contexts where it is part of dramatic healing ceremonies.
Recommended Preparation: VPMA99H3
Breadth Requirement: Social & Behavioural Sciences

**VPMB69H3 Chamber Music II**
The practical study of small ensemble performance through chamber music repertoire, including public presentations and group recitals.
Prerequisite: VPMA69H3. Audition/interview required.
Breadth Requirement: Arts, Literature & Language

**VPMB70H3 Vocal Ensemble Ila**
A continuation of VPMA71H3.
The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz Choir (Section 02). Audition/Interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMA71H3
Breadth Requirement: Arts, Literature & Language

**VPMB71H3 Vocal Ensemble Iib**
A continuation of VPMB70H3.
The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz Choir (Section 02). Audition/Interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMB70H3
Breadth Requirement: Arts, Literature & Language

**VPMB73H3 Instrumental Ensemble Ila**
A continuation of VPMB73H3.
The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMA74H3 or (VPMA92H3)
Exclusion: (VPMB92H3)
Breadth Requirement: Arts, Literature & Language

**VPMB74H3 Instrumental Ensemble Iib**
A continuation of VPMB73H3.
The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMB73H3
Exclusion: (VPMB92H3)
Breadth Requirement: Arts, Literature & Language
VPMB75H3 Music in Islamic Cultures
An introduction of the relationship between music and Islam, and its manifestation in different genres (religious, folk, classical, popular) and regions (from the Middle East to Indonesia, as well as the global diaspora). This course examines the variety of musical expression within cultures linked by Islamic religion and values.
Recommended Preparation: VPMA99H3
Breadth Requirement: Social & Behavioural Sciences

VPMB77H3 Music in Religion and Ritual
An examination of the role of music in the context of religion and ritual in many cultures. We will examine general theories and several ethnographic examples ranging from ancient shamanistic and animistic rituals in Central Asia and the Muslim world religions.
Recommended Preparation: VPMA99H3
Breadth Requirement: Social & Behavioural Sciences

VPMB78H3 Balinese Gamelan: Performance and Context
An introduction to the repertory and performance of Balinese Gamelan. Combines practical music-making and academic study. Students will learn to play the Balinese Gamelan - an orchestra of bronze percussion instruments - and examine the integral function of gamelan in Balinese cultural, ceremonial, and religious life.
Recommended Preparation: VPMA99H3
Breadth Requirement: Arts, Literature & Language

VPMB79H3 Performing Arts of Asia
An exploration of music, dance and drama in East Asia, Southeast Asia and South/Central Asia with particular reference to religious life, classical genres, tribal and folk traditions and popular/contemporary developments.
Recommended Preparation: VPMA99H3
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB80H3 Music in the Baroque and Classical Eras
An examination of music in Western Society during the period ca. 1600 to ca. 1800. This course integrates close analysis of selected compositions with a study of the historical, social, cultural, and political contexts of music-making during this period.
Prerequisite: VPMA79H3 & VPMA80H3 & VPMA90H3
Exclusion: (VPMB87H3)
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB81H3 Music in the Romantic Era
An examination of music in Western society during the period ca. 1800 to ca. 1900. This course integrates close analysis of selected compositions with a study of the historical, social, cultural, and political contexts of music-making during this period.
Prerequisite: VPMA79H3 & VPMA80H3 & VPMA90H3
Exclusion: (VPMB88H3)
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB82H3 Music in the Modern and Contemporary Eras
An examination of music in Western society during the period ca. 1900 to the present. This course integrates close analysis of selected compositions with a study of the historical, social, cultural, and political contexts of music-making during this period.
Prerequisite: VPMA79H3 & VPMA80H3 & VPMA90H3
Exclusion: (VPMB89H3)
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB90H3 Materials of Music II
A continuation of VPMA90H3.
Prerequisite: VPMA90H3 or Royal Conservatory Grade III harmony or equivalent.
Breadth Requirement: Arts, Literature & Language

VPMB94H3 Jazz
A history of jazz from its African and European roots to present day experiments. Surveys history of jazz styles, representative performers and contexts of performance. No previous musical experience is required.
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB95H3 Elementary Musicianship II
A continuation of Musicianship I, preparing students for further theoretical studies and/or participation in one of the performance ensembles (Concert Choir, Concert Band, Jazz Choir, Jazz Band, String Ensemble).
Prerequisite: VPMA95H3
Breadth Requirement: Arts, Literature & Language

VPMB96H3 Popular Music
An examination of the genres and history of twentieth-century popular music with particular attention to its social and commercial contexts. The course will focus on developments during the 1950s and 1960s-- including rock & roll, soul, folk-rock, and the British invasion--examining the performing styles and recordings of legendary "stars". No previous musical experience required.
Breadth Requirement: History, Philosophy & Cultural Studies

VPMB97H3 Film Music
An introduction to the techniques and history of music for films. A survey of the ways music is used in the cinema from its inception to the present day, with an emphasis on the collaboration between film composers and directors. No previous musical experience required
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC69H3 Chamber Music III
The practical study of small ensemble performance through chamber music repertoire, including public presentations and group recitals. Audition/interview required.
Prerequisite: VPMC69H3
Breadth Requirement: Arts, Literature & Language

VPMC70H3 Vocal Ensemble IIa
A continuation of VPMC71H3.
The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz...
Prerequisite: VPMB74H3 or (VPMB92H3) and Winter sessions (a and b) in the same ensemble. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.

Prerequisite: VPMB71H3
Breadth Requirement: Arts, Literature & Language

VPMC71H3 Vocal Ensemble IIIb
A continuation of VPMC70H3.
The practical study of vocal ensemble performance. There are two available ensembles: Concert Choir (Section 01) and Jazz Choir (Section 02). Audition/Interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMC70H3
Exclusion: (VPMC92H3)
Breadth Requirement: Arts, Literature & Language

VPMC73H3 Instrumental Ensemble IIIa
A continuation of VPMC74H3.
The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMBA74H3 or (VPMBA2H3)
Exclusion: (VPMCA2H3)
Breadth Requirement: Arts, Literature & Language

VPMC74H3 Instrumental Ensemble IIIb
A continuation of VPMC73H3.
The practical study of instrumental ensemble performance. There are four available ensembles: Concert Band (Section 01), String Ensemble (Section 02), Flute Choir (Section 03), and Jazz Band (Section 30). Audition/interview required. Students may participate in more than one ensemble concurrently with a limit of 3.0 credits in total. Students are normally expected to complete both Fall and Winter sessions (a and b) in the same ensemble.
Prerequisite: VPMC73H3
Exclusion: (VPMCA2H3)
Breadth Requirement: Arts, Literature & Language

VPMC80H3 Opera
An investigation of opera as a multimedia art form involving music, drama, and spectacle, through the study of works and attendance at live performances. The course also examines opera's entanglement with media and technologies, and the way vital social and cultural issues are represented on the operatic stage.
Prerequisite: VPMBA90H3 & one course from the series VPMBA80H3-VPMB82H3 or (VPMB86H3)-(VPMB89H3)
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC83H3 Music and Gender
An inquiry into the construction and reflection of gender and sexual identities in Western music. The course will emphasize discourses surrounding feminism and the role of women in music, masculinity studies, and gay, lesbian, bisexual and transgendered studies and their relationships to musical genres, works, production and reception.
Prerequisite: VPMBA90H3 & two courses from the sequence VPMBA80H3-VPMB82H3 or (VPMB86H3)-(VPMB89H3)
Exclusion: HMU207H
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC84H3 Issues, Approaches, and Exchanges in Popular Music
An examination of issues in the study of western and non-western popular music and their intersection with other fields of humanistic inquiry. It will explore models of critical analysis and questions surrounding ideology, performance, reception, technology and the relationship of popular music to other media including cyberspace, film and television. Same as IEEC81H3
Prerequisite: At least 1.0 full credit in Humanities at the B-level.
Exclusion: IEEC81H3
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC88H3 Special Topics in Music and Culture
The investigation of an area of current interest and importance in musical scholarship. The topic to be examined will change from year to year and will be available in advance on the course website.
Prerequisite: VPMBA90H3 & one course from the series VPMBA80H3-VPMB82H3 or (VPMB86H3)-(VPMB89H3)
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC89H3 Music and Politics
An inquiry into how music functions as a political force both historically and in contemporary society. Introducing students to uses of music that both reflect and shape various political positions, the course draws on methodologies from political science, history, classical studies, anthropology, cultural and literary theory.
Prerequisite: At least 1.0 full credit in Humanities at the B-level.
Breadth Requirement: History, Philosophy & Cultural Studies

VPMC90H3 Materials of Music III
A continuation of VPMB90H3, with an emphasis on analysis.
Prerequisite: VPMB90H3
Breadth Requirement: Arts, Literature & Language

VPMC91H3 Introduction to Electronic Music
An introduction to understanding electronic, electroacoustic and computer generated music and developing creative skills in these media through theoretical, aesthetic, and practical perspectives.
Prerequisite: VPMB90H3, and at least one other VPM course at the B-level
Recommended Preparation: VPMB82H3
Enrolment Limits: 12
Breadth Requirement: Arts, Literature & Language

**VPMC93H3 Orpheus**

An examination of the myth of Orpheus and the variety of interpretations it has inspired in music and the other arts.
Prerequisite: Two courses from the series VPMB80H3-VPMB82H3
Exclusion: (VPMB72H3)
Recommended Preparation: VPMB90H3
Breadth Requirement: History, Philosophy & Cultural Studies

**VPMC95H3 Musical Diasporas in Canada and the USA**

This course examines the unique role of music and the arts in the construction and maintenance of transnational identity in the North American diaspora. Examples under study will cover a wide range of communities (e.g. Asian, Caribbean and African) and places (e.g. Los Angeles, Toronto and Detroit).
Prerequisite: VPA99H3 & [1.0 full credit in VPM courses at the B-level]
Breadth Requirement: Social & Behavioural Sciences

**VPMC96H3 Music in the Medieval and Renaissance Eras**

An examination of music in Western society during the period ca. 500 to ca. 1600. This course integrates close analysis of selected compositions with a study of the historical, social, cultural, and political contexts of music-making during this period.
Prerequisite: VPMA90H3 & 2 courses from VPMB80H3-VPMB82H3
Exclusion: (VPMB86H3)
Breadth Requirement: History, Philosophy & Cultural Studies

**VPMC97H3 Music, Technologies, Media**

An exploration of music's relationships to media and technology, and how these shape musical practices, consumption, and understanding in historical and contemporary contexts. Topics include music printing, music journalism, development of acoustic, mechanical, and electronic instruments, the recording industry, radio, electroacoustic and computer composition, and digital dissemination via the internet.
Prerequisite: At least 1.0 full credit in Humanities at the B level.

**VPM80H3 VPM81H3 Independent Study in Music**

A directed research, composition or performance course for students who have demonstrated a high level of academic maturity and competence. Students in performance combine a directed research project with participation in one of the performance ensembles (Concert Choir, Concert Band, Jazz Choir, Jazz Band, String Ensemble).
Note: Students must submit a proposed plan of study for approval, and must obtain consent from the supervising instructor and the music program supervisor.
Prerequisite: A minimum overall average of B+ in VPM courses, and at least 1.0 full credit in music at the C-level, not including credits in performance. Students in the Composition option must also have completed VPMC90H3. Students in the Performance/research option must also have completed VPMC71H3 or VPMC74H3. Students are strongly advised to arrange their independent study well in advance of the beginning of the session.

**VPMC98H3 Sound and Spectacle: Intersections and Exchanges in Music and the Visual Arts**

See the general Visual and Performing Arts section of this Calendar for a full course description.
Breadth Requirement: History, Philosophy & Cultural Studies

---

**Studio**

*Program Director:* T. Mars (416-287-7137)  *Email:* mars@utsc.utoronto.ca

The Studio program at UTSC offers courses in drawing, painting, sculpture, photography, performance art, video, new media, animation, and conceptual practices. Students can also take specialized courses in digital imaging, sound art, or thematic courses that explore such things as the relationships between art and globalization, or art and politics, or time-based art practices. UTSC Studio students develop a combination of technical, theoretical, conceptual, and critical skills that enable them to express and communicate their ideas confidently in a variety of visual languages. Students explore art as a tool for examining and intervening in visual culture, to consider the role of creativity in shaping communities locally and globally.

Our students are encouraged to engage with the diversity of contemporary art by examining art-making from aesthetic, intellectual, social, and political perspectives. They are exposed to current positions in contemporary art theory, criticism, and curation and study the history of art from various cultural and historical viewpoints. The wide range of artistic experiences offered by the UTSC Studio program provides a rigorous general visual arts education for students interested in careers in the cultural and design sectors. Studio also offers focused preparation for students interested in pursuing advanced visual art study at the graduate level.

The Studio program is connected to the department of Visual and Performing Arts, which offers students an interdisciplinary framework for analyzing the ideas and theories connecting the arts, and encourages students to explore the related fields of literature, history, anthropology, and other areas of Humanities and Social Sciences.

**Guidelines for 1st year course selection**

VPSA62H3 Foundation Studies in Studio, which covers basic media and concepts through practice and discussion, must be taken with its co-requisite VPSB63H3. But Why Is It Art? before advancing to other Studio courses.

Students will be expected to purchase the materials necessary for each course. An estimate of the costs is available from the instructor.

The Studio Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_st.html
MAJOR PROGRAM IN STUDIO (ARTS)
Undergraduate Advisor Email: studio-program-supervisor@utsc.utoronto.ca

Enrolment in the Major in Studio is limited. Students must apply to enter the program after completing four credits including VPSA62H3 and VPSA63H3. Decisions are made on program admissions only twice a year, in May and August, and are based on student requests submitted to the Registrar through ROSI. Admission is determined on the basis of a student’s overall GPA and grades in VPSA62H3 and VPSA63H3.

Program Requirements
Students must complete eight full credits including:
1. VPSA62H3 Foundation Studies in Studio
2. VPSA63H3 But Why is it Art?
3. VPHA46H3 Ways of Seeing: Introduction to Art Histories
4. VPSA70H3 Drawing I
   VPSB74H3 Drawing II
5. At least one-half credit from:
   VPSC66H3 Theory and Practice: Two-Dimensional Work
   VPSC68H3 Theory and Practice: Time-Based Work
   VPSC69H3 Theory and Practice: Art in a Globalizing World
   VPSC70H3 Theory and Practice: New Media in Studio
6. 3.5 additional credits from courses in VPS, at least one full credit of which must be at the C-level.
7. One full credit at the D-level in VPS

MINOR PROGRAM IN STUDIO (ARTS)
Undergraduate Advisor Email: studio-program-supervisor@utsc.utoronto.ca

Enrolment in the Minor in Studio is limited. Students must apply to enter the program after completing four credits including VPSA62H3 and VPSA63H3. Decisions are made on program admissions only twice a year, in May and August, and are based on student requests submitted to the Registrar through ROSI. Admission is determined on the basis of a student’s overall GPA and grades in VPSA62H3 and VPSA63H3.

Program Requirements
Students are required to complete a total of four full credits as follows:
1. VPSA62H3 Foundation Studies in Studio
2. VPSA63H3 But Why is it Art?
3. VPHA46H3 Ways of Seeing: Introduction to Art Histories
4. VPSA70H3 Drawing I
5. 1.0 credits at the B-level in VPS
6. 0.5 credits from the following:
   VPSC66H3 Theory and Practice: Two-Dimensional Work
   VPSC68H3 Theory and Practice: Time-based Work
   VPSC69H3 Theory and Practice: Art in a Globalizing World
   VPSC70H3 Theory and Practice: New Media in Studio
7. An additional 0.5 credits at the C-level in VPS

VPSA61H3 Painting I
An investigation of the basic elements and concepts of painting through experimentation in scale and content. Prerequisite: VPSA62H3 & VPSA63H3
Exclusion: (VPSB61H3), VIS201H
Enrolment Limits: 20 per section
Breadth Requirement: Arts, Literature & Language

VPSA62H3 Foundation Studies in Studio
An introduction to the importance of content and context in the making of contemporary art. Corequisite: VPSA63H3
Exclusion: VIS130H
Enrolment Limits: 20 per section
Breadth Requirement: Arts, Literature & Language

VPSA63H3 But Why Is It Art?
This introductory seminar examines the key themes, concepts, and questions that affect the practice of contemporary art. We will look at specific cases in the development of art and culture since 1900 to understand why and how contemporary art can exist as such a wide-ranging set of forms, media and approaches. Exclusion: VIS120H
Breadth Requirement: History, Philosophy & Cultural Studies

VPSA70H3 Drawing I
An investigation of the various approaches to drawing, including working from the figure and working with ideas. Prerequisite: VPSA62H3 and VPSA63H3
Exclusion: (VPSB70H3), VIS205H
Enrolment Limits: 20 per section
Breadth Requirement: Arts, Literature & Language

VPSA71H3 Introduction to Sculpture
This course introduces students to the use of three-dimensional materials and processes for creating sculptural
objects. Traditional and non-traditional sculptural methodologies and concepts will be explored. Prerequisite: VPSA62H3 & VPSA63H3
Enrolment Limits: 15. Preference will be given to students in Arts Management Co-op, Humanities Co-op, Studio and VPA specialist programs.

**VPSA72H3 Introduction to Photography**

An introduction to fundamental photographic concepts including depth, focus, stopped time, lighting and photographic composition in contrast to similar fundamental concerns in drawing and painting. A practical and historical discourse on the primary conceptual streams in photography including various documentary traditions, staged photographs and aesthetic approaches from photographic modernism to postmodernism. Prerequisite: VPSA62H3 & VPSA63H3
Corequisite: VPSA74H3
Enrolment Limits: 20. Preference will be given to students in Arts Management Co-op, Humanities Co-op, Studio and VPA specialist programs.
Breadth Requirement: Arts, Literature & Language

**VPSA73H3 Introduction to Video**

An introduction to the basic principles of video shooting and editing as well as an investigation into different conceptual strategies of video art. The course will also provide an introduction to the history of video art. Prerequisite: VPSA62H3 & VPSA63H3
Exclusion: VIS202H
Enrolment Limits: 15. Preference will be given to students in Arts Management Co-op, Humanities Co-op, Studio and VPA specialist programs.
Breadth Requirement: Arts, Literature & Language

**VPSA74H3 Introduction to Digital Studio Practice**

An introduction to pixel and vector-based, two-dimensional image processing, printmaking and web illustration. Basic digital skills and quality control issues will be addressed through studio investigation of Adobe Photoshop and the production of professional digital prints. Prerequisite: VPSA62H3 & VPSA63H3
Exclusion: VIS218H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB62H3 Painting II**

A continuation of Painting I with an emphasis on images and concepts developed by individual students. Prerequisite: VPSA61H3 or (VPSB61H3)
Exclusion: VIS220H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB63H3 Sculpture Concepts**

Contemporary sculptural practice is a diverse and expanded field that covers a range of strategies that confound traditional definitions of sculpture and blur the boundaries with other contemporary art forms. We will explore key ideas that transform sculpture into three-dimensional practices that embrace time, found material, architecture and audience interaction. Prerequisite: VPSA62H3 & VPSA63H3 & 0.5 full credit in Studio at the A-level.

**VPSB71H3 Books and Multiples**

Exploring the production, history and use of artists’ books, students will focus on visuals and text, incorporating low-tech and printmaking approaches to multiples. Prerequisite: VPSA70H3 & [VPSA61H3 or VPSA71H3 or VPSA72H3 or VPSA74H3]
Exclusion: VIS321H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB72H3 Digital Publishing**

A course for students interested in publishing artworks in digital formats such as e-books, short-run printed catalogues and blogs. Lessons will identify common editorial and image preparation concerns while introducing software for assembling images, videos, sounds, graphics and texts into coherent and intelligently designed, digital publications. Creative solutions are expected. Prerequisite: VPSA62H3 and VPSA63H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB73H3 Experiencing Visual Contemporary Arts: Presentation and Practices I**

This course is designed to offer students direct encounters with artists and curators through studio and gallery visits. Field encounters, written assignments, readings and research focus on contemporary art and curatorial practices. The course will provide skills in composing critical reviews, artist statements and written proposals for art projects. Prerequisite: VPSA62H3 and VPSA63H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB74H3 Drawing II**

A continuation of VPSA70H3 with an increased emphasis on the student's ability to expand her/his personal understanding of the meaning of drawing. Prerequisite: VPSA62H3 & VPSA63H3 & [VPSA70H3 or (VPSB70H3)].
Exclusion: VIS211H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

**VPSB75H3 Photo-based Work**

A studio course in digital photography as it relates to the critical investigation of contemporary photo-based art. Prerequisite: VPSA72H3 & VPSA74H3
Corequisite: VPSB80H3
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

**VPSB76H3 Intermediate Video**

This course is designed to provide a history of contemporary video art production. The course will familiarize students with more advanced methods of production and contemporary video works. Classes will include technical instruction, screenings and discussions of tapes, critiques, written assignments and assigned readings. Prerequisite: VPSA73H3
VPSB77H3 Introduction to Performance Art

This course covers the history and practice of performance art. Students will employ contemporary performance strategies such as duration, ritual, repetition, intervention, tableau vivant, endurance and excess of materials in their projects. We will also study the relationship of performance to other art disciplines and practices such as theatre and sculpture.
Prerequisite: [VPSA62H3 & VPSA63H3] or [VPDA10H3 & VPDA11H3] or [(VPDA01H3) & (VPDA02H3)] Exclusion: VIS208H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSB80H3 Digital Studio Practice

An in-depth investigation of digital imaging technologies for serious studio artists and new media designers. Emphasis is placed on advanced image manipulation, seamless collage, invisible retouching and quality control techniques for fine art production. Project themes will be drawn from a critical analysis of contemporary painting and photo-based art.
Prerequisite: VPSA74H3
Exclusion: VIS318H
Recommended Preparation: VPSA72H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB83H3 Art and Activism

This course will explore contemporary artistic practices that blur the boundary between art and activism. We will examine how artists address political issues and the techniques they use to reach different types of audiences. Students will do research and develop projects that address specific local issues and wider social concerns.
Prerequisite: VPSA62H3 & VPSA63H3 & 0.5 full credit in Studio at the A-level
Exclusion: VIS307H
Enrolment Limits: 20
Breadth Requirement: Social & Behavioural Sciences

VPSB85H3 Text as Image/Language as Art

An elementary study of the typographic arts will inform presentation strategies, but the investigation of critical cultural discourse through language as visual art will form the most important content of this course. How do visual artists employ words in their art?
Prerequisite: VPSA62H3 & VPSA63H3 & 0.5 full credit in Studio at the A-level
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB86H3 Sculpture and Technology

Students will be introduced to both the principles and practicalities of working with the concept of change as it relates to sculpture. Students will use both traditional and non-traditional materials in combination with technologically based media and processes including such things as simple circuits, machines, switches, LEDs, etc.
Prerequisite: VPSA62H3, VPSA63H3 and 0.5 FCE at the A-level in Studio.
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSB87H3 Documentary Photography

Photography has a rich tradition both as an art form and as a documentary practice. Each of these has engendered its own technique, aesthetic and cultural context. This course is designed to introduce students to the documentary branch of photography through focused, personal, photo-journalistic projects accomplished outside of the studio.
Prerequisite: VPSA72H3 & VPSA74H3
Recommended Preparation: VPSB75H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB88H3 Introduction to Sound Art

Students will be introduced to sound as a medium for art making. Listening, recording, mapping, editing, and contextualizing sounds will be the focus of this course. Sound investigations will be explored within both contemporary art and experimental sound/music contexts.
Prerequisite: [VPSA62H3 & VPSA63H3] or VPMA80H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB89H3 Introduction to Digital Animation

A non-traditional course in the digital production of non-analog, two dimensional animation through the use of computer based drawing, painting, photography and collage. Students will learn design strategies, experimental story lines, sound mixing, and video transitions to add pace, rhythm, and movement to time-based digital art projects.
Prerequisite: VPSA62H3 & VPSA63H3 & VPSA70H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB90H3 Experiencing Visual and Contemporary Arts: Presentations and Practices 2

This course focuses on the finer details of curating contemporary art. Students will delve into the work of selected artists and curators with an emphasis on the conceptual and philosophical underpinnings of their projects. Term work will lead to a professionally curated exhibition organized by the students.
Prerequisite: VPSB73H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB91H3 Documentary Video

This course is designed to introduce students to documentary video approaches in video art. Students will gain insight into the history and development of the experimental documentary genre through screenings, readings, and field trips. The course will provide students with the opportunity to research, develop, and produce a short documentary project.
Prerequisite: VPHA46H3 & VPSA73H3 & VPSB76H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSB95H3 Kinetic Sculpture

Students will produce art projects using mechanical principles to create sculptural forms that change over time. Students will be encouraged to use altered machines, simple electronic components and a wide range of materials.
Prerequisite: VPHA46H3 & VPSB86H3 and 1.0 full credit at the B- and/or C-level in Studio.
Exclusion: (VPSB64H3)
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC54H3 Painting III
An advanced course for students who are able to pursue individual projects in painting, with a focus on contemporary practice and theory.
Prerequisite: VPHA46H3 & VPHC54H3 & VPSB62H3 & VPSB74H3 & an additional 0.5 credit at the B- or C-level in Studio
Exclusion: VIS301H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC55H3 Drawing III
An advanced course for students who are able to pursue individual projects dealing with the complex relationships between drawing and other art practices like installation, painting and mixed media.
Prerequisite: VPHA46H3 & VPSB74H3 & an additional 0.5 credit at Studio at the B- or C-level.
Exclusion: VIS305H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSC56H3 Studio Practice
A supervised course focused specifically on the development of the student's work from initial concept through to the final presentation. Students may work in their choice of media with the prior written permission of the instructor.
Prerequisite: VPHA46H3 and 3.5 credits in Studio including at least 1.0 full credit at the B- and/or C-level in the area of study.
Exclusion: VIS311H
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSC58H3 Advanced Photo Concepts
Focusing on both theory and practice, this is a portfolio-based course aimed at the development of idiosyncratic photographic styles and subject matter. Printing and presentation will form an important part of this portfolio's development. Students will research international networks, publications and institutions devoted to photographic discourse.
Prerequisite: VPHA46H3 & VPSB80H3 & VPSB75H3
Exclusion: VIS318H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC59H3 Advanced Installation and Site-Specific Art
This course will focus on all aspects of large-scale installation including architecture, projections, multi-media, and conceptual works.
Prerequisite: VPHA46H3 and 1.0 full credit at the B- and/or C-level in Studio.
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC60H3 Advanced Video
An advanced course focusing on complex video techniques and contemporary presentation strategies. The course will cover such areas as video projection, multi-channel works, feature length projects and advanced post-production techniques.
Prerequisite: VPHA46H3 & VPSB76H3 & 0.5 additional full credit at the B- or C-level in Studio.
Exclusion: VIS302H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC66H3 Theory and Practice: Two-Dimensional Work
An exploration of ideas and practice with an emphasis on two-dimensional work, including digital imaging.
Prerequisite: VPHA46H3 and at least 1.0 full credit at the B- or C-level in courses dealing with two dimensions.
Exclusion: VIS211H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC68H3 Theory and Practice: Time-Based Work
An exploration of ideas and practice with an emphasis on time-based media: performance, video, audio, time-based sculpture and installation.
Prerequisite: VPHA46H3 and 1.0 full credit in VPS at the B- or C-level in courses dealing with time-based media.
Exclusion: VIS303H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC69H3 Theory and Practice: Art in a Globalizing World
This course will focus on the influence of global visual culture on contemporary art practices; exploring how artists respond to orientalism, colonial histories, migration, media, tourism, and the international art world. The culturally diverse backgrounds of students and their understanding of global media will be starting points for studio projects.
Prerequisite: VPHA46H3 & 1.0 full credit in Studio at the B- or C-level
Exclusion: VIS325H
Enrolment Limits: 15
Breadth Requirement: History, Philosophy & Cultural Studies

VPSC70H3 Theory and Practice: New Media in Studio
Information technologies are radically and rapidly transforming our culture. Networking, robotics, WiFi, GPS, ubiquitous computing, data mining, RFID, biotech, kinetic art, surveillance, sound installation, digital image processing and interactive display are all offering new opportunities for the artist as well as new critical issues to address. Students will create affordable projects that address these issues.
Prerequisite: VPHA46H3 & (VPSB80H3 & (VPSB75H3 or VPSB76H3 or (VPSB82H3)) or VPSC58H3 or VPSC60H3 or (VPSB74H3)) & 0.5 additional credit at the B- or C-level in Studio.
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language
VPSC71H3 Performing with Cameras
This course investigates the relationship of the body to the camera. Using both still and video cameras and live performance students will create works that unite the performative and the mediated image. The course will cover how the body is framed and represented in contemporary art, advertising and the media.
Prerequisite: VPHA46H3 & [VPSB77H3 or [VPDB01H3 & VPDB02H3]] & [VPBS75H3 or VPSB76H3 or VPSBC8H3 or VPSCH0H3]]
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC73H3 Interdisciplinary Drawing Concepts
Interdisciplinary Drawing Concepts will extend drawing into a range of other media, allowing students to explore the sculptural, temporal and performative potential of mark-making.
Prerequisite: VPHA46H3 & VPSB74H3 & 0.5 additional credit at the B- or C-level in Studio.
Exclusion: VISP32H
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC75H3 Advanced Sculpture
Advanced Sculpture will provide students with an opportunity for a deeper investigation into various materials and fabrication techniques. This course will focus on the theory and practice of object making through studio assignments that develop a critical and technical literacy towards both traditional and non-traditional sculpture materials.
Prerequisite: VPHA46H3 & VPSA71H3 or VPSB63H3 or VPSB68H3 and 1.0 full credit at the B- or C-level in Studio.
Enrolment Limits: 15
Breadth Requirement: Arts, Literature & Language

VPSC89H3 Digital Animation 2
A project based course, building upon concepts developed in VPSB89H3 Introduction to Digital Animation. Students will refine their control of sound, movement and image quality. This course will also introduce three-dimensional wire frame and ray-tracing techniques for constructing convincing 3-D animated objects and scenes as they apply to contemporary artistic practices.
Prerequisite: VPSB89H3
Enrolment Limits: 20
Breadth Requirement: Arts, Literature & Language

VPSD55H3 Advanced Special Topics in Studio
Selected topics for intensive practical and theoretical study in studio. Topics will change from session to session.
Prerequisite: 1.5 full credits at the C- and/or D-level in Studio
Exclusion: VISP401H, VISP402H, VISP403H, VISP404H
Enrolment Limits: 20

VPSD56H3 Advanced Studio Practice
An advanced course for students ready to work independently on their own projects. Students will be expected to work on their projects from conception to a final exhibition in the student-run gallery. Students may work in their choice of media with the written permission of the instructor.
Prerequisite: 1.5 full credits in Studio at the C- and/or D-level
Exclusion: VIS326H, VIS401H, VIS402H, VIS403H, VIS404H
Enrolment Limits: 20

VPSD57H3 Advanced Seminar: Interdisciplinary Practice
An opportunity for students in VPS to explore aspects of contemporary inter-media practice and theory. Students will make work in their choice of media with the written permission of the instructor.
Prerequisite: 1.5 full credits at the C- and/or D-level in Studio
Exclusion: VISP401H, VISP402H, VISP403H, VISP404H
Enrolment Limits: 20

VPSD58H3 Advanced Seminar: Two-Dimensional Work
Students who have developed strong portfolios in painting, drawing or printmaking and intend to pursue professional exhibition careers will continue their investigations into two-dimensional expression and develop professional quality projects with thorough promotional strategies.
Prerequisite: 1.5 full credits at the C- and/or D-level in Studio including [VPSCE6H3 or (VPSCE6H3) or VPSCE8H3 or VPSCE9H3 or VPSCT0H3].
Enrolment Limits: 15

VPSD59H3 Advanced Seminar: Three-Dimensional Work
This studio-seminar will address contemporary issues in sculpture and installation art through independent art production, research, discussions, presentations and assigned readings. Students are expected to develop a body of exhibition quality work and professional support materials. Students who have developed strong portfolios in painting, drawing or printmaking and intend to pursue professional exhibitions will continue their investigations into two-dimensional expression and develop professional quality projects with thorough promotional strategies.
Prerequisite: 1.5 full credits at the C-level in Studio including [VPSCE6H3 or (VPSCE6H3) or VPSCE8H3 or VPSCE9H3 or VPSCT0H3].
Enrolment Limits: 15

VPSD63H3 Independent Studies in Studio: Advanced Level
This option is available in rare and exceptional circumstances to students who have demonstrated a high level of academic maturity and competence. Qualified students will have the opportunity to investigate an area of contemporary art that is of common interest to both student and supervisor.
Prerequisite: At least 15.0 credits & completion of at least one full credit in Studio at the C-level.
Exclusion: VISP401H, VISP402H, VISP403H, VISP404H
Enrolment Limits: 15

VPHD43H3 Curating Contemporary Art
See Art History in the Visual and Performing Arts section of this Calendar for a full course description.

VPAC04H3 “Live”
See the Visual and Performing Arts section of this Calendar for a full course description.
Exclusion: (VPDC06H3), (VPSCE7H3)
Theatre and Performance Studies

Program Director: P. Sperdakos (416-287-7168) Email: sperdakos@utsc.utoronto.ca

The Theatre and Performance Studies Program has been devised to serve students who intend to major or minor in Theatre and Performance, as well as students who have a casual interest in theatre and performance studies. We offer both historical and contemporary theory-based and practical courses, which provide students with opportunities to investigate aspects of theatre and performance from the origins of theatre to contemporary performance practice. In the practical courses, students acquire experience in elements of theatre production, as actors, directors, and technicians; class work leads to performance opportunities in the Leigha Lee Browne Theatre. In order to be admitted into the performance stream of the program, students must successfully complete VPDA10H3 Introduction to Theatre.

Guidelines for 1st year course selection

Students who intend to complete a Theatre and Performance Studies program should include HUMA01H3, VPDA10H3 & VPDA11H3 in their 1st year course selection.

The Theatre and Performance Studies Program Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_dr.htm

MAJOR PROGRAM IN THEATRE AND PERFORMANCE STUDIES (ARTS)

Undergraduate Advisor: Email: taps-program-supervisor@utsc.utoronto.ca

Program Requirements: Students must complete 8.0 full credits as follows:

1. HUMA01H3 Exploring Key Questions in Humanities
2. VPDA10H3 Introduction to Theatre
   VPDA11H3 Introduction to Performance
   VPDB01H3 Intermediate Workshop in Performance I
   VPDB02H3 Intermediate Workshop in Performance II
3. VPDB04H3 Experiencing the Live Theatre
4. VPDB10H3 Theatre History I: From Ritual to Renaissance
   VPDB11H3 Theatre History II: Early Modern and Popular Theatre
   VPDB12H3 Theatre History III: Modern Theatre in Global Context
   [VPDB13H3 Theatre in Canada or ENGC07H3 Canadian Drama]
5. ENGC26H3 Drama: Tragedy
   ENGC27H3 Drama: Comedy
6. VPDD50H3 Advanced Seminar in Theatre and Performance
7. 1.5 additional credits in VPD, one full credit of which must be at the C- or D-level.
   In fulfilling requirement #7, students may substitute one full credit from VPA or another discipline with the Program Director’s written permission.

The following courses are particularly recommended:

VPDB77H3 Introduction to Performance Art
VPMB79H3 Performing Arts of Asia
VPMB93H3 Music for the Theatre
VPMB97H3 Film Music
ENGB14H3 Twentieth-Century Drama
ENGB32H3 Shakespeare in Context I
ENGB33H3 Shakespeare in Context II
ENGB70H3 Introduction to Cinema
GASB15H3 The Arts of South Asia
GASC42H3 Film and Popular Culture in South Asia
GASC45H3 Film and Popular Cultures in East Asia

MINOR PROGRAM IN THEATRE AND PERFORMANCE STUDIES (ARTS)

Undergraduate Advisor: Email: taps-program-supervisor@utsc.utoronto.ca

Program Requirements: Students must complete 4.0 full credits as follows:

1. HUMA01H3 Exploring Key Questions in Humanities
2. VPDA10H3 Introduction to Theatre
   [VPDA11H3 Introduction to Performance or VPDA15H3 Introduction to the Fundamentals of Acting]
   and at least two of the following courses: ENGC07H3, VPDB10H3, VPDB11H3, VPDB12H3, VPDB13H3

Note: Students who do not qualify for either VPDA11H3 or VPDA15H3 should take at least four of the following courses:
A general introduction to theatre as a social institution and a collaborative performing art. This course will survey the nature and function of the various components of the theatrical production process, providing a background for further theatre studies. The successful completion of VPDA10H3 will admit students to subsequent VPD performance courses.

Exclusion: DRM200Y, (VPDA01H3), (VPDA02H3)
Enrolment Limits: 80
Breadth Requirement: Arts, Literature & Language

VPDA11H3 Introduction to Performance
An introduction to performance in its broadest application. This course investigates a wide range of performance practices and theories including traditional Western approaches to basic acting techniques and contemporary performance approaches informed and inspired by the visual arts, music, dance and theatre.
Prerequisite: VPDA10H3 & permission of the Theatre & Performance Studies Teaching Staff
Exclusion: DRM200Y, (VPDA01H3), (VPDA02H3), VPDA15H3
Enrolment Limits: 18
Breadth Requirement: Arts, Literature & Language

VPDA15H3 Introduction to the Fundamentals of Acting
An introduction to basic acting techniques for those with little or no performance experience. This course focuses on developing the essential skills necessary for the craft of acting through the use of improvisation and acting exercises.
Prerequisite: VPDA10H3 & permission of the Theatre & Performance Studies Teaching Staff
Exclusion: (VPDA01H3), VPDA11H3
Enrolment Limits: 16
Breadth Requirement: Arts, Literature & Language

VPDB01H3 Intermediate Workshop in Performance I
This course is intended for students who wish to continue the study of acting for the stage in greater depth. Exercises, discussions, and an increasingly more challenging range of monologues and scenes will be used as vehicles for exploring characterization and the acting process.
Prerequisite: [VPDA10H3 & VPDA11H3] or [(VPDA01H3) & (VPDA02H3)] & permission of the Theatre & Performance Studies Teaching Staff
Breadth Requirement: Arts, Literature & Language

VPDB02H3 Intermediate Workshop in Performance II
A continuation of VPDB01H3 with an emphasis on more advanced performance techniques.
Prerequisite: VPDB01H3 & permission of the permission of the Theatre & Performance Studies Teaching Staff
Breadth Requirement: Arts, Literature & Language

VPDB03H3 Technical Production I
An introduction to the technical elements of theatre production. Students will receive a basic grounding in the fundamentals of stage management, stage lighting, sound operation, set building, scenic painting and general technical practice.
Exclusion: DRM254Y
Breadth Requirement: Arts, Literature & Language

VPDB04H3 Experiencing the Live Theatre
Discovering the special nature of various forms of live theatre. Students will attend six professional productions in a variety of theatres in Toronto and write reviews of their theatre-going experiences. In lectures and seminars students will study contemporary theatrical practices from the perspective of playwrights, performers, etc.
Breadth Requirement: Arts, Literature & Language

VPDB10H3 Theatre History I: From Ritual to Renaissance
A study of theatre history in social and cultural context from its origins in early human ritual through to the European Renaissance. Through specific case-study, this course will trace how ancient traditions both evolved and persisted to create the dramatic forms more familiar to us today.
Exclusion: DRM260H, DRM262H
Breadth Requirement: Arts, Literature & Language

VPDB11H3 Theatre History II: Early Modern and Popular Theatre
A study of theatre history in social and cultural context from the Early Modern period through to WWI. Through specific case-study, this course will focus on the development of bourgeois or domestic drama, as well as on popular theatre such as Melodrama and Pantomime.
Breadth Requirement: Arts, Literature & Language

VPDB12H3 Theatre History III: Modern Theatre in Global Context
A study of theatre history in social and cultural context from WWI through to the present. Through specific case-study, this course will examine the effects of modernism on theatre, as well as the place of ancient performance traditions in a globalizing world.
Exclusion: DRM266H
Breadth Requirement: Arts, Literature & Language

VPDB13H3 Theatre in Canada
An examination of the development of professional theatre in Canada from 1945 to the present. Special attention will be paid to the development of the major theatrical festivals, the regional theatre movement, the rise of alternative theatre and current theatrical trends.
Exclusion: DRM268H
Breadth Requirement: Arts, Literature & Language

VPDB14H3 Introduction to Asian Theatrical Traditions
An introduction to some of the major theatrical traditions of Asia. Students will read translations of plays and study some of the theoretical aspects of Oriental theatre in lectures.
and seminars. Recorded and visual materials will be used extensively.

Breadth Requirement: Arts, Literature & Language

VPDC01H3 Advanced Workshop: Performance
A continuation of the exploration of advanced performance techniques begun in VPDB02H3.
Prerequisite: VPDB01H3 & VPDB02H3 & permission of the Theatre & Performance Teaching Staff
Exclusion: DRM400Y
Breadth Requirement: Arts, Literature & Language

VPDC02H3 Directing for the Theatre
The practical study of basic stage directing techniques in a workshop atmosphere.
This course will provide students with the fundamental tools of the director’s craft, through an investigation of the principles of script analysis, composition and staging, director/actor communication and rehearsal technique, and will culminate in the presentation of short plays.
Prerequisite: VPDB01H3 & VPDB02H3 plus 1 other full credit in Theatre & Performance Studies & permission of instructor
Enrolment Limits: 8
Breadth Requirement: Arts, Literature & Language

VPDC03H3 Technical Production II
A continuation of Technical Production I. Students will explore in greater depth the practical application of the technical elements of theatrical production. As part of the course, students will assume responsibility for some of the technical positions available in U of T Scarborough productions.
Prerequisite: VPDB03H3
Breadth Requirement: Arts, Literature & Language

VPDC05H3 American Musical Theatre
A survey of the development of American musical theatre. Through research into and discussion of American musical theatre history, artists, and landmark productions, students will develop a critical understanding of the form; attendance at a local professional musical production will allow for discussions about the influence of the form on theatre in Canada.
Prerequisite: 2 full credits in Visual & Performing Arts courses.
Enrolment Limits: 40
Breadth Requirement: Arts, Literature & Language

VPDC08H3 Physical Theatre
An exploration of a wide range of physical acting techniques such as mime, clown, mask performance, stage acrobatics, unarmed stage fighting, and so on. This course is designed to further advance students’ performance skills by increasing their vocabulary of physical expression and theatrical communication.
Prerequisite: VPDB01H3 & VPDB02H3
Enrolment Limits: 12
Breadth Requirement: Arts, Literature & Language

VPDC40H3 Special Topics in Theatre I
Special topics for intensive practical study of some specific aspects of theatre. The topic to be explored in this course will change from session to session. Further information can be found on the VPA-Theatre & Performance Studies website.
Prerequisite: Any 3 full credits in Theatre & Performance Studies & permission of the Program Director.
Enrolment Limits: 16

VPDD01H3 Supervised Performance
The practical study of major theatrical productions.
Students will do research connected with the particular play that has been chosen for production at U of T Scarborough.
Prerequisite: VPDC01H3 & permission of the Theatre & Performance Studies Teaching Staff

VPDD20H3
VPDD21H3
VPDD22H3
VPDD23H3 Supervised Studies in Drama, Theatre and Performance
Advanced scholarly projects open to upper-level Theatre & Performance students.
The emphasis in these courses will be on advanced individual projects exploring specific areas of theatre history and/or dramatic literature.
Prerequisite: One full credit in Theatre & Performance at the C-level & permission of the Program Director.

VPDD24H3
VPDD25H3
VPDD26H3
VPDD27H3
VPDD28H3 Independent Projects in Theatre and Performance
Advanced practical projects open to upper-level Theatre & Performance students.
These courses provide an opportunity for individual exploration in areas involving the practice of theatre: directing, producing, design, playwriting, dramaturgy, etc.
Prerequisite: One full credit in Theatre & Performance at the C-level & permission of the Program Director.

VPDD40H3 Special Topics in Theatre II
Selected advanced topics for intensive practical study of some specific aspect of theatre. The topic to be explored in this course will change from session to session. The course will normally be offered during the Winter session. Further information can be found on the VPA – Theatre & Performance Studies website.
Prerequisite: VPDC40H3 or any 3 full credits in Theatre & Performance Studies and permission of the Program Director.
Enrolment Limit: 12

VPDD50H3 Advanced Seminar in Theatre and Performance
A study of key ideas in theatre and performance theory with a focus on pertinent 20th/21st century critical paradigms such as postcolonialism, feminism, interculturalism, cognitive science, and others. Students will investigate theory in relation to selected dramatic texts, contemporary performances, and practical experiments.
Prerequisite: Any three full credits in Theatre and Performance Studies and permission of the Program Director.
Enrolment Limit: 15

Breadth Requirement: Arts, Literature & Language
Women's and Gender Studies

Faculty List

L. Carney, M.A. (Columbia), Associate Professor
A. Hachimi, B.A. (Moulay Ismail), M.A. (Hawaii), Ph.D. (Hawaii), Assistant Professor
J. Park, B.A., M.A. (Sookmyung Women's), M.S., Ph.D. (Illinois), Assistant Professor
C. Guberman, B.A. (Manitoba), M.E.S. (York), Senior Lecturer
N.C. Johnston, M.A., Ph.D. (York, Canada), Senior Lecturer
J. English, M.A., Ph.D. (Toronto), Lecturer
V. Tahmasebi-Birgani, Ph.D. (York), Lecturer

Program Director: C. Guberman Email: c.guberman@utoronto.ca

Women's and Gender Studies is an interdisciplinary program that examines the development, transmission, and transformation of ideas and attitudes about women and gender across different historical periods, societies, and cultures. The program integrates theory and practice by introducing students to scholarship from a wide range of disciplinary perspectives and challenging them to work for change and equality in their communities and in their daily lives. Women's and Gender Studies courses emphasize experiential learning and invite students to consider topics such as women's roles in society, history, philosophy, and religion; gender and the media; women and work; gender, race and class; international development; gender and sexuality; women and politics; women and literature; gender and language; women and social change; women and the family; and gender and the arts. The Women's and Gender Studies program at U of T Scarborough benefits greatly from interdisciplinary interests across the humanities while also reaching further across disciplinary boundaries through its strong affiliation with the social sciences at UTSC. Students will develop critical and analytic skills as thinkers, writers, and communicators for multiple workplace and community environments. The program at U of T Scarborough also emphasizes the diversity of women's lives and experiences globally, particularly in relation to differences in race, ethnicity, class, age, sexual orientation, and disability; the diversity of our student body greatly enriches our consideration of these issues. A degree including Women's and Gender Studies will enable students to assess how women's roles across disciplines impact our understanding of society and history and our actions, past and present, within local and global communities. Students preparing for a career in education, research, business, administration, government, law, journalism, social work, equity issues, or activism are encouraged to consider enrolling in a Women's and Gender Studies program. The program is enhanced by the affiliation of faculty from multiple disciplines at UTSC and draws students from a range of departments.

Guidelines for 1st year course selection

Students who intend to complete a Women's and Gender Studies program should include WSTA01H3 & WSTA03H3 in their 1st year course selection. Students are reminded that degree credit can only be granted for introductory courses when they are taken before upper-level courses for which there are specific prerequisites. Students are encouraged to take HUMA01H3 (Exploring Key Questions in the Humanities) as early as possible in their studies.

The Women's and Gender Studies Study Guide is available at: www.utsc.utoronto.ca/~humdiv/prg_wa.html

MAJOR PROGRAM IN WOMEN'S AND GENDER STUDIES (ARTS)

Undergraduate Advisor: 416-287-7184 Email: wst-undergrad-advisor@utsc.utoronto.ca

Program Requirements

Students must complete seven full credits as follows:

1. WSTA01H3 Introduction to Women's and Gender Studies and WSTA03H3 Introduction to Theories of Feminism
2. WSTB05H3 Fundamentals of Research in Women's and Gender Studies
3. WSTB11H3 Race, Class and Gender
4. WSTC02H3 Applied Research in Women's and Gender Studies
5. WSTD01H3 Senior Project in Women's and Gender Studies or WSTD03H3 Senior Seminar in Health, Sexualities and the Gendered Body/Representations and Constructions of Women and Gender or WSTD04H3 Senior Seminar in Gender, Equity and Human Rights/Gender, Local and Global Communities or One D-level elective cross-listed with WST, with the approval of the program supervisor
6. One further credit in WST
7. 3.0 credits from the list below of which at least 1.0 must be at the C- or D-level. (Students should check course descriptions for prerequisites.)
Note: Not all courses in #7 are offered every year. Courses have been organized into four thematic clusters to assist students in planning - there is no program requirement related to the clusters.

Cluster #1: Health, Sexualities, and the Gendered Body
- ANTC15H3 Genders and Sexualities
- ANTD01H3 The Body in Culture and Society
- ENGC76H3/(VPAC47H3) The Body in Modernity: Theories and Representations
- ENGC77H3/(VPAC48H3) The Body in Contemporary Culture: Theories and Representations
- GGRD10H3 Health and Sexuality
- HLTC02H3 Women and Health: Past and Present
- PSYD18H3 Psychology of Gender
- PSYD22H3 Socialization Processes
- WSTB12H3 Women: Issues of Violence and Safety

Cluster #2: Representations and Constructions of Women and Gender
- ENGB50H3 Women and Literature: Forging a Tradition
- ENGB51H3 Gender and Genre
- ENGC34H3 Early Modern Women and Literature: 1500-1700
- ENGC51H3 Contemporary Arab Women Writers
- ENGD80H3 Women and Canadian Writing
- LINC28H3 Language and Gender
- PHLB13H3 Philosophy and Feminism
- PSYD18H3 Psychology of Gender
- SOCB22H3 Sociology of Gender
- SOCC08H3 Gender and Information Technology
- VPHB57H3 Women in the Arts: Hot Mamas, Amazons, and Madonnas
- VPMC83H3 Music and Gender
- WSTB13H3 Women and the Media
- WSTC12H3 Writing the Self: Global Women's Autobiographies
- WSTC16H3 Criminal Women: Gender, Justice and the Media
- WSTC22H3 Women and Film

Cluster #3: Gender, Equity, and Human Rights
- GASB20H3 Gender and Social Institutions in Asia
- MGTB23H3 Diversity in the Workplace
- POLC94H3 Globalization, Gender and Development
- SOCC09H3 Sociology of Gender and Work
- SOCC10H3 Gendered Selves, Gendered Lives and Inequalities
- SOCC38H3 Gender and Education
- WSTB10H3 Women's Local and Global Movements for Change
- WSTC14H3 Women, Community and Policy Change
- WSTC15H3 Feminism, Education, and Literacy

Cluster #4: Gender, Local and Global Communities, and Diaspora
- ANTC14H3 Feminism and Anthropology
- GASC20H3 Gendering Global Asia
- GASC20H3 Senior Seminar: Social Change and Gender Relations in Chinese Societies
- GGRD09H3 Feminist Geographies
- HISD45H3 Immigrant and Race Relations in Canadian History
- HISD30H3 Gendering America
- HISD46H3 Selected Topics in Canadian Women's History
- HISD56H3 'Coolies' and Others: Asian Labouring Diasporas in the British Empire
- SOCB48H3 Family and Society
- SOCB49H3 Sociology of Family
- SOCC24H3 Changing Family Life in Canada
- SOCC29H3 Special Topics in Sociology of Family
- WSTB15H3 Women in the Cyberspace: Transnational Feminist Networks and Activism
- WSTC10H3 Women and Development
- WSTC11H3 Applied Studies in Women and Development
- WSTC13H3 Women, Gender and Islam
- WSTC19H3 Gender in East Asian Science and Technology
- WSTC20H3 Women and Environments
- WSTC21H3 Gender, Health, Science in Transnational Perspective
MINOR PROGRAM IN WOMEN’S AND GENDER STUDIES (ARTS)
Undergraduate Advisor: 416-287-7184 Email: wst-undergrad-advisor@utsc.utoronto.ca
Program Requirements
Students must complete four full credits as follows:
1. WSTA01H3 Introduction to Women's and Gender Studies
   and
   WSTA03H3 Introduction to Theories of Feminism
2. WSTB05H3 Fundamentals of Research in Women's and Gender Studies
3. WSTB11H3 Race, Class and Gender
4. Two further credits in Women's and Gender Studies at the B, C, or D-level and/or from the list of courses in other disciplines which deal with women's/gender issues provided in #7 in the Major Program; at least one of these credits must be at the C or D-level.

WSTA01H3 Introduction to Women’s and Gender Studies
An introduction to the study of women around the world from an interdisciplinary perspective. Issues to be addressed will include: women's diversity locally and globally, patriarchal foundations, the dynamics of socialization, and the transmission and perpetuation of images of women.
Exclusion: (NEW160Y), WGS160Y
Breadth Requirement: Social & Behavioural Sciences

WSTA03H3 Introduction to Theories of Feminism
An introduction to feminist theories with a focus on the diverse, multidisciplinary and multicultural expressions of feminist thought. An overview of the major themes, concepts and terminologies in feminist thinking and an exploration of their meanings.
Exclusion: (NEW160Y), WGS160Y, WGS200Y
Breadth Requirement: History, Philosophy & Cultural Studies

WSTB05H3 Fundamentals of Research in Women's and Gender Studies
An examination of topical and critical research in women's issues from a cross-cultural and interdisciplinary perspective. Fundamentals of conducting research are examined. This course will provide practice in critical analysis of contemporary issues as they affect women globally. Issues will be drawn from a range of disciplines, including history, sociology, education, literature, the arts and sciences.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]
Breadth Requirement: Social & Behavioural Sciences

WSTB10H3 Women's Local and Global Movements for Change
An examination of local and global movements for change, past and current, which address issues concerning women. This course will survey initiatives from the individual and community to the national and international levels to bring about change for women in a variety of spheres.
Prerequisite: [WSTA01H3 & WSTA03H3]
Exclusion: (WSTA02H3)
Breadth Requirement: Social & Behavioural Sciences

WSTB11H3 Race, Class and Gender
An overview of the complex interactions among race, class and gender in traditional and modern societies. Drawing on both historical and contemporary patterns in diverse societies, the course offers feminist perspectives on the ways in which race, class, gender, and sexual orientation have shaped the lives of women and men.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]
Breadth Requirement: Social & Behavioural Sciences

WSTB12H3 Women: Issues of Violence and Safety
An analysis of violence against women and initiatives toward creating safety. A historical, cultural, and structural approach to studying family, state, economic, and ideological violence against women. Initiatives toward making communities safer, including strategies for prevention and education will be examined.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)] or WSTB05H3 or WSTB11H3 or one half credit from the list provided in #7 in the Major Program]
Exclusion: (NEW373H), WGS373H
Breadth Requirement: Social & Behavioural Sciences

WSTB13H3 Women and the Media
An interdisciplinary approach to feminist critiques of the media. The representation of women will be examined in media such as film, television, videos, newspapers, magazines and radio. Students will also develop a perspective on women's participation in, and contributions toward, the various media industries.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]
Exclusion: (NEW271Y), WGS271Y
Breadth Requirement: History, Philosophy & Cultural Studies

WSTC02H3 Applied Research in Women's and Gender Studies
Students will design and conduct a qualitative research project on an issue of their choice related to women and gender. Field work is the basis of this course. It will also include an overview of the various phases of carrying out research: planning the research project, choosing appropriate methods for data collection, analyzing the data and reporting the results.
Prerequisite: WSTA01H3 & WSTA03H3 & WSTB05H3 & 1.5 full credits taken from the courses listed in #3 and #7 in the Major Program
Exclusion: (WSTD02H3) Enrolment Limits: 15
Breadth Requirement: Social & Behavioural Sciences

WSTC10H3 Women and Development
How development affects, and is affected by, women around the world. Topics may include labour and economic issues, food production, the effects of technological change, women organizing for change, and
an examination of a critical problem within the global context as it affects women in their communities. The class as a whole will determine the issue under consideration. Prerequisite: WSTC10H3 Exclusion: (WSTC10Y3) Breadth Requirement: Social & Behavioural Sciences

**WSTC11H3 Applied Study in Women and Development**

An exploration of the ways in which women from different countries construct the gendered subject in their representations of childhood, sexuality, work, maternity and illness. Texts will be read in English and an emphasis will be placed on the cultural contexts of gender, ethnicity and class. Prerequisite: ENGB50H3 or [WSTA01H3 & [WSTA03H3 or (WSTA02H3)]] & any ENG or FRE literature course Recommended Preparation: WSTB13H3 Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

**WSTC12H3 Writing the Self: Global Women's Autobiographies**

This course situates Muslim women as multidimensional actors as opposed to the static, Orientalist images that have gained currency in the post 9/11 era. Prerequisite: [WSTA01H3 & [WSTA03H3 or (WSTA02H3)]] Exclusion: WSTC30H3 (if taken in the 2008 Winter Session) Breadth Requirement: History, Philosophy & Cultural Studies

**WSTC13H3 Women, Gender and Islam**

Explores historical and contemporary debates regarding the construction of gender in Islam. Topics include the historical representations of Muslim woman, veiling, sexuality, Islamic law and Islamic feminism. This course situates Muslim women as multidimensional actors as opposed to the static, Orientalist images that have gained currency in the post 9/11 era. Prerequisite: ENGB50H3 or [WSTA01H3 & [WSTA03H3 or (WSTA02H3)]] & any ENG or FRE literature course Recommended Preparation: WSTB13H3 Enrolment Limits: 50 Breadth Requirement: Arts, Literature & Language

**WSTC14H3 Women, Community and Policy Change**

An examination of the impact of social policy on women's lives, from a historical perspective. The course will survey discriminatory practices in social policy as they affect women and immigration, health care, welfare, and the workplace. Topics may include maternity leave, sexual harassment, family benefits, divorce, and human rights policies. Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)] Breadth Requirement: History, Philosophy & Cultural Studies

**WSTC15H3 Feminism, Education, and Literacy**

Introduction to feminist education theories and practices focusing on global literacy development for women and girls: feminist debates and pedagogical practices in education from historical and cross-cultural contexts; empowerment and human rights goals for literacy; NGO and community teacher training initiatives; and international efforts to promote education reform. Prerequisite: [WSTA01H3 & [WSTA03H3 or (WSTA02H3)]] Enrolment Limits: 40 Breadth Requirement: History, Philosophy & Cultural Studies

**WSTC16H3 Criminal Women: Gender, Justice and the Media**

This course examines how gender issues influence the history and contemporary development of science and technology in East Asian societies, including China, Japan, and Korea. Students will gain a critical perspective on the role of gender in shaping scientific knowledge and technological advancements in the context of East Asia. Same as IEEC32H3 and GASC19H3 Prerequisite: Any 5.0 full credits Exclusion: IEEC32H3, GASC19H3 Recommended Preparation: [WSTA01H3 & WSTA03H3] or [GASA01H3 & GASA02H3] or (GASB01H3) Enrolment Limits: 50 Breadth Requirement: Social & Behavioural Sciences

**WSTC20H3 Women and Environments**

An examination of the impact the environment has on women's lives around the world. Current and historical perspectives. Topics will include: the impact of environmental degradation on women's bodies; planning for safer places; global sustainable development; ecofeminism; the gender division of spaces. Prerequisite: Two full credits in WST Breadth Requirement: Social & Behavioural Sciences

**WSTC21H3 Gender, Health, Science in Transnational Perspective**

This course provides an advanced introduction to feminist scholarship on science, health, and technology. It examines a history and culture of modern scientific research, health practice, and technologies in western and non-western societies. Same as IEEC31H3 Prerequisite: Any 5.0 full credits Exclusion: IEEC31H3 Recommended Preparation: [WSTA01H3 & WSTA03H3] or [GASA01H3 & GASA02H3] or (GASB01H3) Enrolment Limits: 50 Breadth Requirement: Social & Behavioural Sciences

**WSTC22H3 Women and Film**

This course examines narrative, documentary and experimental films by a selection of global women directors from a social, critical and historical perspective. We will analyze the filmic representations of race, class, gender and sexual orientation, and explore how cinema made by women can challenge or perpetuate notions of gender.
WSTC28H3 Language and Gender
An introduction to the research on differences between women and men in how they use language and how they behave in conversational interaction, together with an examination of the role of language in reflecting and perpetuating cultural attitudes towards gender.
Same as LINC28H3
Prerequisite: WSTA01H3 or WSTA03H3, and one full credit at the B-level in ANT, LIN, SOC or WST.
Exclusion: JAL355H, LINC28H3
Breadth Requirement: Social & Behavioural Sciences

WSTC30H3 Selected Topics in Women's/Gender Studies
An examination of a current topic relevant to women and gender. Students will have the opportunity to explore recent scholarship in a specific content area which will vary from year to year. Participation in a related project/practicum in the community may be incorporated into the course.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]

WSTC31H3 Selected Topics in Women's/Gender Studies
An examination of a current topic relevant to women's and gender studies. Students will have the opportunity to explore recent scholarship in a specific content area which will vary from year to year. Participation in a related project/practicum in the community may be incorporated into the course.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]

WSTC32H3 Selected Topics in Women's/Gender Studies
An examination of a current topic relevant to women's and gender studies. Students will have the opportunity to explore recent scholarship in a specific content area which will vary from year to year. Participation in a related project/practicum in the community may be incorporated into the course.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)]

WSTD01H3 Senior Project in Women's and Gender Studies
Students will choose a topic of special interest to them, and undertake an in-depth investigation of the topic under the supervision of a Women's and Gender Studies faculty member. A substantial essay on the approved topic will be given to two evaluators - the course coordinator and the supervising faculty member.
This course is only open to Women's and Gender Studies Major program students with a strong record who are completing the last 5 credits of their degree. Enrolment must be approved by the program supervisor and the course coordinator in the term prior to the start of the course.
Prerequisite: At least 12.0 full credits including WSTA01H3 & (WSTA03H3 or WSTA02H3) & WSTB05H3 & 1.5 full credits taken from the courses listed in #3 and #7 in the Major Program.

WSTD03H3 Senior Seminar in Health, Sexualities and the Gendered Body/Constructions of Women and Gender
An advanced and in-depth examination of selected topics related to health, sexualities, the gendered body, and the representations and constructions of women and gender. The course will be in a seminar format with student participation expected. It is writing intensive and involves a major research project.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)] & WSTB11H3 & two C-level courses from Clusters 1 & 2 in Requirement 7 of the Major Program
Enrolment Limits: 20

WSTD04H3 Senior Seminar in Gender, Equity and Human Rights/Gender, Local and Global Communities
An advanced and in-depth examination of selected topics related to women and gender, equity, diversity and human rights in the context of local and global communities, and diaspora. The course will be in a seminar format with student participation expected. It is writing intensive and involves a major research project.
Prerequisite: WSTA01H3 & [WSTA03H3 or (WSTA02H3)] & WSTB11H3 & two C-level courses from Clusters 3 & 4 in Requirement 7 of the Major program.
Enrolment Limits: 20
Admissions

Re-enrolling University of Toronto Scarborough Students

Students previously registered at U of T Scarborough who wish to return after suspension or an absence of three or more consecutive sessions (at least 12 months) must submit an "Application To Re-Enrol" at the Registrar's Office. This form may be printed from our web site: www.utsc.utoronto.ca/registrar. Students who studied elsewhere during their absence from U of T Scarborough must report the attendance in the application, and should apply to re-enrol well before the final deadline as we need to review official transcripts from the other institution(s).

Enrolment in most courses is on a first-come, first-serve basis. In order to have the application processed in time to take advantage of the wider availability of courses, when the "course enrolment period" begins, students are strongly advised to apply to re-enrol by the dates listed below:

- Mid-March for the Summer Session
- Mid-June for both the Fall and the Winter Sessions
- Early October for the Winter Sessions

Late applications to re-enrol will be considered ONLY if received before classes begin in the session. For further information on re-enrolment, telephone 416-287-7001. See also the Overall Standing section of this Calendar.

Students who have a four-year degree conferred normally continue as Non-Degree Students. U of T Scarborough students who wish to start a second degree must complete a UTSC “Second Undergraduate Degree” application form available in Admissions and Student Recruitment, Room AA128 by April 1. For details, contact Admissions and Student Recruitment at 416-287-7529. UTSC students who graduated with a three year degree (discontinued), will register as degree candidates working towards a four year degree.

Admissions

The following is a brief description of undergraduate admission policies and procedures. Full information may be obtained from:

| Admissions and Awards | or | Admissions and Student Recruitment |
| University of Toronto | | University of Toronto Scarborough |
| 172 St. George Street | | 1265 Military Trail |
| Toronto, Ontario, Canada M5R 0A3 | | Toronto, Ontario, Canada M1C 1A4 |
| website: www.adm.utoronto.ca | | website: www.utsc.utoronto.ca/admissions |

Applicants interested in graduate studies should contact the School of Graduate Studies.

Website: www.sgs.utoronto.ca
Telephone: 416-978-6614

Application Procedures and Deadlines

Most of the applications for U of T Scarborough programs are submitted to the Ontario Universities Application Centre for initial processing. Students who are currently enrolled full-time in an Ontario secondary school submit a 101 application. Details are available at secondary school guidance offices. Other applicants seeking full-time degree studies, except for applicants from other divisions of U of T (Internal U of T transfers) will apply using a 105 application that is available on-line at the Ontario Universities Application Centre's website at www.ouac.on.ca (telephone: 519-823-1940).

Internal U of T Transfer, Part-time Degree and Non-Degree on-line applications are available at the Admissions and Awards website: www.adm.utoronto.ca

Upon receipt of the application from OUAC, the University of Toronto's Admissions and Awards office sends confirmation and refers the applicant to an on-line Applicant Instruction Guide. Applicants are strongly advised to submit the application well in advance of the deadlines listed below.

- Applicants to the Concurrent Teacher Education Programs should apply well in advance of the February 1 deadline and complete an Applicant Profile, to be filled out on-line at the CTEP website.
- Note to Applicants to Joint Programs with Centennial College: Information about your application will be shared with the relevant Program Supervisor at Centennial College to evaluate your application.

2012 Summer Session Deadline

- March 1 for Part-time degree and Non-degree applications
- May 1 for Non-Degree Visiting Students applying from other North American universities on a Letter of Permission

2012/2013 Fall/Winter Session Deadlines:

Full-time degree study:

- February 1 for applications to the Concurrent Teacher Education Programs
- March 1 for 101 applications, for applicants who are currently enrolled full-time in an Ontario high school
• March 1 for 105D applications, for applicants who are residing in Canada or for applicants who are Canadian Citizens/Permanent Residents who reside outside Canada, who are not currently enrolled full-time in an Ontario high school (including those with post-secondary studies).
• March 1 for Internal U of T degree applications, for applicants who have registered in other divisions of U of T
• March 1 for 105F applications, for applicants who reside outside Canada who are not currently attending an Ontario secondary school (in Ontario or abroad) in a daytime program of study (including those with post-secondary studies).

Other Applications:
• June 1 for Part-time Degree, Non-Degree or Visiting Student (Non-Degree) applying from other North American universities on a Letter of Permission

General Admission Requirements to the University of Toronto Scarborough for 2012-2013

Applicants from Ontario Secondary Schools Under 1999 OSS Diploma (4 year) requirements
• Applicants must be eligible to receive the Ontario Secondary School Diploma (OSSD)
• Applicants must present at least six (6) Grade 12 University (U) courses or University/College (M) courses
• One credit must be Grade 12 English ENG4U
• Applicants must present credits to satisfy any prerequisites of specific courses or specific programs in which they intend to enrol.
• Applicants must satisfy English Facility Requirements

Applicants from Ontario Secondary Schools under 1989 OS:IS Diploma (5 year) requirements
• Applicants must be eligible to receive the Ontario Secondary School Diploma (OSSD)
• Applicants must present at least six (6) Ontario Academic Courses (OACs)
• One credit must be OAC English 1/Anglais
• Applicants must present credits to satisfy any prerequisites of specific courses or specific programs in which they intend to enrol.
• Applicants must satisfy English Facility Requirements

English Facility Requirements
Applicants may request the English Facility Requirements brochure from Admissions and Awards or visit the website: www.adm.utoronto.ca/eft
Telephone 416-978-2190

1. Proof of adequate English facility is required of all applicants except for those, (i) whose first language is English, or (ii) who have studied full-time for at least four years in an English language school system located in a country where the first language is English, or (iii) whose first language is French and have studied for at least four years in the Canadian school system.

2. Applicants who are required to present proof of English facility shall be exempt from the normal admission requirement of having to present ENG4U English (or equivalent course). Such applicants are, however, encouraged to include English in their preparation for university. If English 12 U or OAC English 1 is completed as an extra credit, applicants will not be penalized by having the result included in their admission average if the grade is low.

3. Acceptable Tests/Qualifications and Required Scores
• The Test of English as a Foreign Language (TOEFL). The minimum requirements are:
  Internet-Based Test - total score of 100 + 22 on Writing
  Paper-Based Test - total score of 600 and 5.0 on TWE
• Michigan English Language Assessment Battery. The minimum requirement is an overall score of 85 with no part scoring below 80.
• International English Language Testing System (IELTS). The minimum requirement is an overall band of 6.5, with no band below 6.
• Academic English Course completed at the University of Toronto, English Language School, School of Continuing Studies (http://learn.english.utoronto.ca). The minimum requirement is a grade of B at the 60 (Advanced) level.

For other acceptable tests and requirements, please refer to: www.adm.utoronto.ca/eft

Note: For an applicant who scores just below the minimum requirements who is otherwise well-qualified for admission, Admissions and Awards will automatically consider other academic evidence of English proficiency (for example, results in English courses).

Prerequisites
Students should choose Grade 12 University and/or University/College Preparation courses that will fulfill the prerequisites for university courses and programs they intend to take. Review U of T Scarborough brochures, the U of T Scarborough website or consult with Admissions and Student Recruitment staff.

Examples:
• Management and Computer Science programs require both MHF4U Advanced Functions and MCV4U Calculus & Vectors
• All programs in Biological Sciences require MHF4U Advanced Functions, MCV4U Calculus & Vectors, SBI4U Biology, and SCH4U Chemistry
Admission By Equivalent Certificate
The certificates listed below are considered acceptable for admission consideration. Applicants must present courses to meet specific course and program prerequisites. Review the prerequisite information given for Ontario applicants on our website and in our brochures to determine the equivalent prerequisites you need.

Applicants from Other Canadian Provinces and Territories
Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, North West Territories, Nova Scotia, Nunavut, Prince Edward Island, Saskatchewan, Yukon - Grade 12. Québec - 12 academic C.E.G.E.P. courses (Transfer credit is granted to candidates who have completed more than the 12 academic required CEGEP courses.)

Note: Those who completed their high school studies in Canada prior to 1989 should contact Admissions and Awards before applying to check entrance requirements.

Admission with Transfer Credit
Students who have completed work at other universities or at other Faculties or Schools of this University may be considered for admission with advanced standing credit. Acceptance of transfer credits among Ontario universities shall be based on the recognition that, while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. Insofar as possible, acceptance of transfer credit should allow for maximum recognition of previous learning experience in university-level courses.

Applicants from Ontario Colleges of Applied Arts and Technology (CAAT)
1. Candidates who have completed a two-year CAAT diploma program with sufficient academic content (or two years of a three-year CAAT diploma program) are eligible to be considered for admission to the first year of a degree program. Up to two full credits will be considered as transfer credit (effective 1997; the policy change is not retroactive).
2. Candidates who have completed a three-year CAAT diploma program are eligible to be considered for admission with up to five full credits as transfer credit.
3. Candidates who have completed a one-year CAAT diploma program (or one year of a two- or three-year CAAT diploma program) are normally not eligible for consideration for admission. They must qualify for consideration by completing Grade 12 U/M courses (or equivalent).

Applicants from Centennial College
who are applying for admission to a joint program at U of T Scarborough after completing a corresponding program at Centennial College are asked to contact Admissions and Student Recruitment for further details. Also, see the Joint Programs website: www.utsc.utoronto.ca/jtprogs

Applicants holding the International Baccalaureate Diploma (IB)
Candidates who have completed the Diploma with good results will be considered for admission. Those seeking admission to programs that require mathematics must present Higher Level Mathematics, Standard Level Mathematics or Mathematics Methods with the Calculus option. Transfer credit is awarded for most Higher Level subjects completed with a grade of 5, 6 or 7.
www.utsc.utoronto.ca/admissions/requirements

Applicants from the United States of America
Candidates who have completed Grade 12 from an accredited high school with a high grade point average and good scores on the SAT Reasoning Test or ACT (including the Writing Test) results, and a minimum of two SAT Subject Tests or AP or IB scores (or combination thereof covering two different subjects). Transfer credit is awarded for several Advanced Placement tests with scores of 4 or 5. www.utsc.utoronto.ca/admissions/requirements

Applicants with other qualifications
Candidates who wish to apply for admission on the basis of work completed in other countries or on the basis of other qualifications should check our websites or write to Admissions and Awards, outlining their academic qualifications and intended area of study. Information on admission requirements for applicants with international credentials may be obtained from the Admissions and Awards website.

Mature Students
Candidates who do not hold the published admission requirements who are at least twenty-one years of age, Canadian citizens, Permanent Residents of Canada or Protected Persons (Convention Refugees) and have been resident in Ontario for at least twelve months may be considered for admission as mature students. The applicants must complete, with high standing, (a) one of Woodsworth College's Academic Bridging Program courses or (b) two Grade 12 U/M courses completed after the student is 21 years of age. One course must be English ENG4U. Further information on the Academic Bridging Program is available at
www.wdw.utoronto.ca or by contacting Woodsworth College (416-978-7487). Students must receive permission from Admissions and Awards to qualify for consideration using these options. Note that students who wish to prepare for certain university programs such as management or science programs may have to do additional studies to ensure all of the prerequisites are attained.

Notes: (i) Status in Canada: An applicant who wishes to qualify as a Mature Student must be one of the following: a Canadian Citizen or Permanent Resident or officially recognized as a Protected Person (Convention Refugee) by Citizenship and Immigration Canada, admitted to and remaining in Canada (ii) Age: The applicant must be 21 years of age by October 1 of the Fall Session or by July 15 for the Summer Session.

Non-Degree Students
A Non-Degree Student is one who is taking courses at U of T Scarborough but who is not proceeding towards a University of Toronto Bachelor's degree. Most Non-Degree students have completed degree studies and are taking further courses for their own interests or for professional preparation.

Visiting Student (Non-Degree) on a Letter of Permission
Students enrolled in undergraduate studies at other accredited North American universities and with valid Letters of Permission may apply directly to U of T Scarborough to take courses for transfer credit at their own home university. Visiting Student status does NOT imply acceptance for Degree status or other Non-Degree student status. Call 416-287-7529 for applications or download the application from our website at www.utsc.utoronto.ca/admissions/forms

Senior Citizens
Canadian citizens or permanent residents of Canada who are at least 65 years of age by the first day of term may apply for admission as part-time Non-Degree Students. Normal admission requirements are usually waived. Tuition fees will be charged. Call the Assistant Registrar, Admissions at 416-287-7529 for information.

How Decisions Are Made
The specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, performance in subjects relevant to the academic program selected and, for applicants to co-operative programs, teaching programs and joint programs, supplementary application information. While the University of Toronto recognizes that there may be valid reasons for a student to repeat a course, in general we urge students do as well as possible on their first attempt. In considering students for admission and scholarships, the University reserves the right to give preference to students whose marks are the result of a single attempt at each course. Possession of minimum requirements does not guarantee acceptance. Because of space limitations, preference will be given to applicants with the best qualifications. Applications will be considered from candidates whose qualifications do not meet the normal requirements, but such candidates must offer written evidence of exceptional ability, or of extenuating circumstances. Such students may be admitted "on condition". Students on condition have special academic requirements that must be met and should refer to the "Overall Standing" section of this Calendar, specifically the entry on "Determination of academic status for students admitted on condition". Applicants who matriculated prior to the current year are advised to contact Admissions and Awards for information. The University of Toronto reserves the right to determine whether or not credentials of degree-granting institutions in Ontario meet the standards for admission to University of Toronto programs.

Academic Awards and Scholarships
The following section of the Calendar provides general information about scholarships and awards at the U of T Scarborough. For complete information, please visit our website at: www.utsc.utoronto.ca/registrar

U of T Scarborough seeks to recognize excellent academic achievements of students registered in undergraduate degree programs. We consider students for awards in the following categories:

1. Admission Awards: Available to new students entering U of T Scarborough directly from secondary school. There are two types of awards:
   a. Automatic consideration
   b. Application or nomination based

2. In-course Awards: Available to students continuing their studies at U of T Scarborough. In this category there are two types of awards:
   a. Automatic consideration
   b. Application or nomination based

A general condition for holding an entrance or in-course award is that the student must register at U of T Scarborough in the following academic year with degree status. Students who have been awarded a scholarship, which is based on enrolment in a particular program of study, must continue in that program to receive the award. U of T Scarborough reserves the right to not award a scholarship, if, in a
Academic Awards and Scholarships

particular year, the academic achievement of the candidate is not of high standard. To be considered for any award, a student must be enrolled in or graduating from an Honours Bachelor program.

Admission Awards
For complete information on admission scholarships and awards, visit our website at: www.utsc.utoronto.ca/admissions
U of T Scarborough allocates entrance scholarships to students entering first year directly from secondary school. A limited number of entrance scholarships are available to international students. Successful applicants will be notified of awards received at the time they receive an offer of admission to the University. In considering students for scholarships, the University reserves the right to give preference to students whose marks are the result of a single attempt at each course.

In-course Awards
In-course awards are given to students who have completed their First, Second or Third year of study towards an Honours Bachelor’s degree. For award purposes, a year of study is defined as the completion of 5.0 credits. In order to give more students an opportunity to be recognized for excellent academic achievement U of T Scarborough’s Awards policy permits a student to hold only one major award. Decisions for in-course awards are made in the summer and notification letters are normally sent out in August. An awards ceremony is normally held in November. More information is available from the Office of Registrar’s website: www.utsc.utoronto.ca/registrar

University of Toronto Scarborough Honours List
U of T Scarborough publishes an honours list annually which includes the names of all students who have achieved a scholarship grade point average of 3.70 or better in their most recent year study. Students are considered for the honours list upon completion their 5th, 10th, and 15th credit.

Graduation Awards
Graduation awards are given at the time of graduation. They include medals and prizes awarded for outstanding achievement during the final year of undergraduate study. Students who graduate at the Fall Convocation are considered for graduation awards in the following year together with students who are graduating at the Spring Convocation. An awards ceremony is normally held in June.

Recognition of Exceptional Academic Achievement: High Distinction and Distinction
Graduating students who have completed at least ten full-credits while registered at U of T Scarborough will be considered for the following recognition:

High Distinction
Students who graduate with a cumulative GPA of 3.50 or better are recognized as graduates “With High Distinction.” This achievement is noted on the diploma and transcript.

Distinction
Students who graduate with a cumulative GPA between 3.20 and 3.49 are recognized as graduates “With Distinction.” This achievement is noted on the diploma and transcript.

Other students with a cumulative GPA of 3.20 or better will be considered on an individual basis.

University of Toronto Scarborough Honours List
U of T Scarborough publishes annually an honours list, including the names of all graduating students who have achieved a scholarship grade point average of 3.70 or better in their final year (full-time study or equivalent amount of part-time study). Students are considered for the honours list at the end of the session in which they complete their 20th credit.

Financial Aid
There are a variety of financial aid programs that provide assistance to full-time and part-time students through student loans and/or grants. Generally, assistance will depend on the student's demonstration of financial need. Before turning to university administered programs, students are expected to access funding through a government student loans program (or equivalent).

Government Financial Aid
Each province administers a student loans program to assist full-time students with educational and living expenses during the study period. Eligible students must be Canadian citizens, permanent residents or protected persons. In Ontario, this program is known as OSAP. The OSAP application allows students to apply for a variety of different types of aid. Students are always considered for grants first (grants are non-repayable), and then a student loan. These types of loans (federal and provincial) are interest free and non-repayable as long as the student remains enrolled in full-time studies. Information is available at the Office of the Registrar's website: www.utsc.utoronto.ca/registrar
University of Toronto Grants
Grants (or bursaries) are non-repayable amounts of financial assistance. U of T Scarborough students have access to two grant programs. They are:

1. U of T Advance Planning for Students (UTAPS); and
2. U of T Scarborough Bursary/Grant for Full-Time Undergraduate Students

Both of these programs are designed to assist students who have qualified for government financial assistance, but who still need more help to balance their budget. Visit the Office of the Registrar's website (www.utsc.utoronto.ca/registrar) for full details on how to be considered for one or both of the above grants.

University of Toronto Work-Study Program
This program is partly funded by the University and the Ministry of Training, Colleges and Universities, and provides on-campus, part-time employment to students with financial need. Students must enrol in and maintain a full-time course load for the duration of the study period. At U of T Scarborough there are two hiring periods: the Fall semester for the Fall and Winter sessions and the Summer semester for students registered for full time studies in the Summer session. Information and applications are available from the Academic Advising & Career Centre, Room AC213 (http://webapps.utsc.utoronto.ca/aaccweb/).

Other Programs
Visit the financial aid section of the website of the Office of the Registrar (www.utsc.utoronto.ca/registrar) for more information.

Academic Regulations

Student Responsibility
Students are responsible for making themselves familiar with the information in this Calendar, particularly with this section, as well as instructions published periodically by the Registrar's Office. Students are responsible for seeking guidance from a responsible officer if they are in any doubt; misunderstanding, or advice received from another student will not be accepted as cause for dispensation from any regulation, deadline, program or degree requirement. Members of the Registrar's Office and the Academic Advising & Career Centre will assist students in interpreting the regulations and explaining their application in particular cases. Where appropriate, they will help those who encounter special difficulties to request special consideration. Students whose registration contravenes the regulations may be withdrawn from courses, regardless of when the contravention comes to light.

Calendar changes
The information published in this Calendar outlines the rules, regulations, curricula and Programs for the University of Toronto Scarborough. The publication of information in this Calendar does not bind the University to the provision of courses, Programs or facilities as listed herein.

The University of Toronto Scarborough reserves the right to change without notice any information contained in this Calendar, including any rule or regulation.

This Calendar is published in both online and printed editions. Every effort has been made to ensure the compatibility of both versions. In the case of any discrepancy, the online version shall apply. Any post-publication corrections and/or updates to the print edition of this Calendar will be updated to the online Calendar at www.utsc.utoronto.ca/calendar. Students are strongly advised to check back regularly to keep informed of changes.

Enrolment limits
The University of Toronto Scarborough reserves the right to limit the number of registrants in any Program or course where the number of qualified students exceeds the teaching or other resources available.

Student Cards (TCards)
All students are required to have a student card in order to write tests and exams, request transactions at the Registrar's Office, obtain a UTORid account, use the Library, Computer Centre, and Athletic facilities. New students who do not have a student card should obtain one from the Registrar's Office. Cards are provided free of charge to all new students. Replacement cards are issued in the Library T-card Office (see http://utsc.library.utoronto.ca/services/loan-services/tcards-at-utsc for more information). A fee is charged to replace cards.

Students in debt to the University
If, at the end of the academic session, all debt to the University has not been paid, the University of Toronto Scarborough imposes the following academic sanctions until such time as the debt is cleared:

• Transcripts are not issued
• Diplomas are not released, nor is oral or written confirmation of degree and program completion provided. However, indebted graduands will be allowed to participate in the ceremony and have their names appear in the Convocation program
• Further studies are denied
• Written certification of degree and program status is not provided
• Confirmation of enrolment status is not provided
• Registration is refused to re-enrolling students (i.e. returning after suspension or after an absence of twelve months or more)

The following debts are taken into consideration when applying sanctions:
• Tuition fees
• Residence fees and other residence charges
• Library fines
• Loans made by colleges, faculties or the University
• Health service accounts
• Unreturned or damaged instruments, materials and equipment
• Fines levied under the Code of Student Conduct

Student Web Service
University of Toronto student records are maintained by a student-friendly web-based system called ROSI. These records are shared with Degree Navigator, a web-based academic audit and advising system.

ROSI (www.rosi.utoronto.ca)
Students use ROSI to access a variety of online enrolment services, such as:
Course and Subject POSI enrolment
• Viewing grades, GPAs and academic status
• Requesting transcripts
• Viewing their financial account
• Updating personal information
• Listing their ROSI transactions and viewing their Personal Timetable

Login to ROSI to see a complete list of services available from ROSI's main menu. Access to ROSI is through student number and a six-digit personal identification number (PIN). All PINs are set initially to year, month and day of birth (e.g. March 23, 1993 = 930323) and must be changed to one of the student's own choice before access to ROSI is granted. (Students accessing ROSI for the first time will be prompted to change PIN. Students should also set up their PIN reactivation feature - see below.) For security there is a limit of three on the number of failed attempts that can be made to enter PIN. Students who exceed the limit will have their access to ROSI suspended. Students whose access has been suspended or who have forgotten their PIN can reactivate their PIN themselves provided they set up the PIN reactivation feature on ROSI in advance. Students who did not set up PIN reactivation in advance should contact the Registrar's Office immediately. Photo identification is required in order to restore access.

Student System Access Fee: Incidental fees include a Student System Access fee.

ROSI: Further information about ROSI is included in the Registration Guide and at www.rosi.utoronto.ca

Degree Navigator (www.rosi.utoronto.ca)
Degree Navigator is a web-based academic audit and advising system which is accessed through the ROSI website using student number and ROSI PIN. Students can use it to:
• Check their progress towards their degree and program completion
• Do "What If?" assessments
• Check different sets of program requirements

All student information (e.g. courses, program enrolments) in Degree Navigator comes from ROSI and is refreshed once a day. Only U of T Scarborough and Faculty of Arts and Science records are currently available. There may be instances where some students have concerns about their academic audit. Should this happen, we encourage you to use the "CONTACT US" option in Degree Navigator. The University welcomes any comments or questions.

U of T Scarborough Registrar's Office Home Page (www.utsc.utoronto.ca/registrar)
Here you will find important announcements, registration procedures, important dates and deadlines, the course timetable for each session as well as future course offerings, final exam schedule, Subject POSI information, fee payment instructions, access to eServices, petition resources and graduation information. From this site you can receive answers to most questions at any time of day, using AskUS at: www.utsc.utoronto.ca/askus. Visit the Registrar's Office Homepage for this information and much more.
Course Selection

Course selection

In selecting their courses, students must adhere to the following regulations.

1. Prerequisites and corequisites for each course, as stated in the course description, must be met, unless waived by the instructor. The Registrar’s Office does NOT require notification of a prerequisite waiver. However, when the course being waived is listed as a program requirement, students should discuss the matter in advance with their program supervisor.

2. Students may not register for credit in a course if they have already passed another course shown in the course description as an exclusion to that course. Note: The Faculty of Arts & Science and the U of T Mississauga Calendars do not usually list U of T Scarborough courses as exclusions. Students taking such courses must check the U of T Scarborough Calendar for possible exclusions. Students who are in any doubt about whether or not an exclusion exists or whether or not a course can be used to meet a prerequisite of another course or can be applied to a program requirement should consult their program supervisor.

3. Students may not re-register for credit in a course if they have already passed that course. Students may re-register in a course they have taken, but failed. In the latter case, both registrations in the course are shown on the student's record, and both grades count in the student's grade point average. Students may not register for credit in a course that is a specific prerequisite for a course they have already passed. When this occurs, the course is counted as "extra" (see "Extra (EXT) courses" in the "Standing in a Course" section of this Calendar). This rule does not apply in the case of non-specific prerequisites (such as "one B-level credit in History") or in the case where one of two or more courses that are not exclusions of each other may serve as prerequisite. Where students may not register in a course for credit, they may register in it as an extra course. In such cases, the course is shown on the student's record but the grade is not included in the student's grade point averages nor does the course count towards the degree. However, if appropriate, it may be used to meet program requirements that call specifically for it.

4. Undergraduate students at UTSC are not permitted to enrol in more than 3.0 credits per term without permission from the Program Supervisor. Students should also note:
   ▪ The usual load maximum for a full-time student in any session is 2.5 full credits.
   ▪ Students who are on probation should read about course load restrictions and requirements in the “Overall standing” section of this Calendar.
   ▪ BBA students should read the “Management” section of this Calendar regarding the overall course load limit.
   ▪ Students with approved deferred final examinations should read the “Special consideration, petitions and appeals” section of this Calendar.

5. Students who wish to register in courses in the Faculty of Arts and Science or at the University of Toronto at Mississauga should refer to the "Courses on other campuses" section of this Calendar. There are limits to the number of courses that may be taken on other campuses.

6. Full-time students are those students who register in at least 1.5 full credits in a session. Students who are restricted to part-time studies may have a load of no more than 1.25 full credits in any session until they have completed at least 3.0 full credits and have a cumulative grade point average of at least 2.00.

7. Students must register for their courses in accordance with instructions issued each session by the Registrar's Office. Students who wish to change their registration:
   ▪ May do so only until the deadlines for adding and dropping courses, stated in the Sessional Dates section of this Calendar;
   ▪ Must notify the Registrar's Office of any change through ROSI.

8. Where multi-sectioned courses have a common examination, students enrolled in an evening section of the course may be required to sit an examination during the day and vice versa. Students may also be required to write Saturday or Sunday term tests or examinations.

Registration

Students are responsible for the accuracy of their own registration. When selecting, adding and dropping courses in ROSI, they should always list their courses upon completing the transaction. Registration consists of two basic steps:

1. Course selection, and
2. Fees payment (or an arrangement of a fee deferment).

Both must be completed by the appropriate deadlines in order to be considered a "registered" student and to retain a place in any course selected. (For deadlines and further information, see the Registration Guide or the Registrar's Office website at www.utsc.utoronto.ca/registrar.)

Course selection

Courses may be selected through ROSI. For regulations on course selection, see above.

Note: Degree students who have completed 4.0 or more full credits must be enrolled in an appropriate combination of Subject POSs before they may select courses. (This includes new students with transfer credit.)

Fees payment

All fees are posted to the student's financial account. Students may view their financial account on ROSI. Fee payment (or deferral of fees) must be made by the relevant deadline. Deadlines and information on how to pay fees is included in the Registration Guide and at www.utsc.utoronto.ca/registrar. An electronic invoice is available to view on ROSI; printed invoices are not routinely mailed to
students. For further information go to www.fees.utoronto.ca or contact Student Accounts, University of Toronto, 215 Huron St, 3rd Floor, Toronto, Ontario, M5S 1A2; telephone: 416-978-2142; fax: 416-978-2610 or 416-978-5572; email: info.studentaccount@utoronto.ca

Program (Subject POST) registration
All degree students with at least 4.0 credits are required to register on ROSI in their Specialist, Major or Minor Programs. Students may register only in Programs (Subject POSTs) offered by University of Toronto Scarborough. ROSI Subject POST codes can be found at: www.utsc.utoronto.ca/subjectpost. (For regulations governing Programs, see the Programs of Study section of this Calendar.)

Summer Session
Students who registered at U of T Scarborough in the 2011 Summer, the 2011 Fall or the 2012 Winter Sessions and who are not on suspension are automatically eligible to register and may pick up their registration packages beginning in late March at the Registrar's Office. Other students who want to register should contact the Registrar's Office or visit the Registrar's Office webpage for information at www.utsc.utoronto.ca/registrar (see "Re-enrolling" in the Admissions section of this Calendar).

Fall & Winter Sessions
Students who registered at U of T Scarborough in the 2011 Fall, the 2012 Winter or the 2012 Summer Session and who are not on suspension are automatically eligible to register and may pick up their registration packages beginning in late March at the Registrar's Office. Other students who want to register should contact the Registrar's Office or visit the Registrar's Office webpage for information at www.utsc.utoronto.ca/registrar (see "Re-enrolling" in the Admissions section of this Calendar).

Year of Study
The following is used to define the year of study of degree students:
1st year - has fewer than 4.0 full credits
2nd year - has 4.0 to 8.5 full credits
3rd year - has 9.0 to 13.5 full credits
4th year - has 14.0 or more full credits
5th year - (CTEP students only) - has 19.0 or more full credits.

Course changes
Note: For ROSI hours on deadline dates, go to www.rosi.utoronto.ca/hours.html

Students may add courses or drop courses without academic penalty through ROSI up to the dates stated in the Sessional Dates section of this Calendar. The deadlines for adding or dropping courses are strictly applied. Students who make changes through ROSI should end their transaction by listing their courses to ensure that the change has been processed properly. They will not receive written confirmation of the change but it will be recorded in the Activity log kept by the University which can be accessed through ROSI. Students who drop courses by the appropriate deadline may be entitled to a fees adjustment. (See the fees refund schedule and information published each session by Student Accounts at www.fees.utoronto.ca).

Adding a course
Some courses have restricted admission and may require approval before students are allowed to enrol in them. Restricted courses and the approval required are listed in the timetable at www.utsc.utoronto.ca/timetable.

Changing meeting sections in a course
Students may change meeting sections in a course at any time provided that, if the change takes place after the deadline for adding the course, they have appropriate approval. Approval normally comes from the instructor of the new meeting section or from the course coordinator. Changes must be recorded at the Registrar's Office through ROSI (until the last day to add the course) and on a section change request form thereafter. Note: For some course sections, changes are not permitted on ROSI - these are listed in the timetable at www.utsc.utoronto.ca/timetable.

Dropping a course
There are two academic deadlines for dropping courses. (See the "Sessional Dates" section of this Calendar.)
- If students withdraw from a course by the earlier deadline, no record of registration is shown on the student's transcript.
- If students withdraw from a course by the later deadline, the course remains on the student's record with a grade of LWD indicating late withdrawal. Students are permitted to withdraw late from a maximum of 3.0 credits during their studies within the University of Toronto Scarborough, the Faculty of Arts and Science or the University of Toronto Mississauga. If students cease to complete course requirements but do not withdraw officially by the later deadline, a grade based on the marks awarded (including a zero for any incomplete work) will be recorded. Students are not permitted to cancel or withdraw from a course in which an allegation of academic misconduct is pending from the time of the alleged offence until the final disposition of the accusation. Such courses are designated GWR until the allegation is resolved.
Withdrawal from the session
Students who drop all their current courses and do not intend to enrol in any other course in that session (Summer, Fall or Winter) must cancel their registration through ROSI. Note: Refunds of incidental fees are determined by the date of the cancellation of registration and not the date on which the last course was dropped.
Students dropping all their courses in a session may wish to speak to an Academic Advisor or Registrar's Office staff about the academic and financial consequences of withdrawal.

Standing in a course
Grading scheme (as of September 1998)
Students are assigned a grade in each course, as follows (Grades earned prior to September 1998 remain as originally reported):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Point Value</th>
<th>Percentage Equivalent</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
<td>90-100</td>
<td>Excellent</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
<td>85-89</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>80-84</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>77-79</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>73-76</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td>70-72</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>67-69</td>
<td>Adequate</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>63-66</td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
<td>60-62</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
<td>57-59</td>
<td>Marginal</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td>53-56</td>
<td></td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
<td>50-52</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>No Value</td>
<td>No Value</td>
<td>Credit in a Credit/No-credit course</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>0-49</td>
<td>Wholly Inadequate</td>
</tr>
<tr>
<td>P</td>
<td>No Value</td>
<td>No Value</td>
<td>Pass in a Pass/Fail course</td>
</tr>
<tr>
<td>FL%</td>
<td>0.0</td>
<td>No Value</td>
<td>No credit in Pass/Fail course</td>
</tr>
<tr>
<td>NCR</td>
<td>No Value</td>
<td>No Value</td>
<td>No credit in Credit/No-credit course</td>
</tr>
<tr>
<td>NC%</td>
<td>0.0</td>
<td>No Value</td>
<td>No credit in Credit/No-credit course</td>
</tr>
</tbody>
</table>

Grades of 'F', 'NC%' and 'FL%' are failing grades, yielding no standing in a course and no degree credit. Students are cautioned that a numerical score on an assignment is not deemed to be automatically equivalent to the corresponding letter grade.

Credit/No credit courses
Effective with the 2010 Summer Session, UTSC degree students may select up to 1.0 full credit of their degree credits to be assessed on a Credit/ No Credit basis. Students must choose this mode of assessment no later than the last day to enrol in the relevant course. Requests for this type of assessment are submitted to the Registrar’s Office via eService. Once the deadline has passed, students may not under any circumstances reverse this decision.
To achieve a status of CR (Credit), a student must achieve a final mark of at least 60%. Marks below that will be assessed as NCR (No Credit). Courses with a final status of CR will count as degree credits but will have no effect on the student's GPA. They may count as Breadth Requirements and degree credits, but cannot be used to satisfy program requirements. Courses with a final status of NCR will not count as degree credits but will not count as failures, and will also not be included in the GPA calculation.
Students may exercise this option to a total of 1.0 full credit within the total number of credits required for a degree.
Note: This option is available only for UTSC courses. The choice is not restricted as to year or level of course. This option is not available to UTSC non-degree students or to students from other faculties/divisions of the University of Toronto.

Pass/Fail
Certain courses, including some visual and performing arts courses, are graded on a Pass/Fail (P/F) basis. In these courses to achieve a status of P (Pass), a student must achieve a final mark of at least 50%. Where students earn a grade of “Pass” in a P/F course, the course is not included in the grade point average; where students earn a grade of “Fail”, the course is included as an “F” (value zero) in the grade point average.
In courses graded on a Pass/Fail basis (P/F), students may opt for a normal graded assessment with specific grades assigned. Students must choose this mode of assessment no later than the last day to enrol in the relevant course. Requests for this type of assessment are made through the course instructor offering the course. Once the deadline has passed, students may not, under any circumstances, reverse this decision.

Aegrotat standing
On petition, a grade of "Aegrotat" (AEG) may be assigned. This grade is assigned on the basis of work completed where medical or similar evidence demonstrates that a student is unable to complete course requirements within a reasonable time, and where a student has already completed at least 60% of the work of the course with a grade of C minus or better. Where a student is assigned Aegrotat standing, the course counts as a credit but is not included in any grade point average. Students who require a letter grade will be expected to complete the work of the course.
Extra (EXT) courses

Extra courses are those courses in which students may not register for credit (see "Course Selection" above in this section of the Calendar). The course and its grade will appear on the student's transcript (designated as an extra course) but the grade is not included in the student's grade point averages nor does the course count towards the degree. However, if appropriate, it may be used to satisfy program requirements.

Other notations

The following have no grade point value and do not yield credit:

<table>
<thead>
<tr>
<th>Notation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWD</td>
<td>Late withdrawal. (See the “Sessional Dates” section of this Calendar. This grade is assigned to courses dropped after the initial deadline but before the examination period begins.)</td>
</tr>
<tr>
<td>WDR</td>
<td>Withdrawal by petition without academic penalty after the relevant deadline. (See &quot;Special Consideration, Petitions and Appeals&quot; below in this section of the Calendar.)</td>
</tr>
<tr>
<td>GWR</td>
<td>Grade withheld pending review</td>
</tr>
<tr>
<td>NGA</td>
<td>No grade available</td>
</tr>
<tr>
<td>SDF</td>
<td>Standing deferred on the basis of incomplete course work because of medical or similar means.</td>
</tr>
<tr>
<td>IPR</td>
<td>In progress</td>
</tr>
</tbody>
</table>

Grade Reports

Grade reports are not issued to students. Instead, final grades, grade point averages and academic standing are made available through ROSI. Grades are available as soon as they have been submitted and approved. Grade point averages for individual students are available shortly after the student's last grade is approved and academic standing is available in September, January and May. In addition, letters are mailed to students who are on academic probation, suspended or refused further registration.

Overall standing

Grade point averages (GPAs)

1. A grade point average is calculated as follows: the grade points earned in each full credit course and one-half the grade points earned in each half-credit course are added together and this total is divided by the number of full credits taken.
2. A sessional grade point average is calculated on the basis of all courses taken in a given session (Summer, Fall, Winter) having a grade point value.
3. A cumulative grade point average is calculated on the basis of all courses taken having a grade point value.
4. An annual grade point average is calculated on the basis of all courses taken in the Fall/Winter Sessions (September-May) having a grade point value. This is provided for information only and is not used for the assessment of academic status.
5. Sessional and cumulative grade point averages are calculated at the end of each session and included on the student's academic record and transcript.

Determination of academic status

Note: The following rules apply to all students except visiting students whose academic status is not assessed or as indicated in "Determination of academic status for students admitted on condition", "Determination of academic status for re-enrolling students at University of Toronto Scarborough" and "Determination of academic status for students in the Certificate Program in Business" below.

Academic status will be determined as follows for students who have attempted at least three full credits since beginning their studies at the University of Toronto Scarborough or in other arts and science divisions of the University. It is determined at the end of each Session.

1. **In good standing**
   Students who maintain a cumulative grade point average of 1.60 or better are said to be "in good standing".

2. **On probation**
   - Students who have attempted at least three full credits and have a cumulative GPA of less than 1.60 are placed on probation.
   - Students returning from suspension (see 5 below and any provision in previous rules) shall be placed on probation again.

3. **Probation cleared**
   Students may clear probation by achieving a cumulative GPA of 1.60 or better. Students who have cleared probation shall be said to be again "in good standing".

4. **Probation continued**
   Students may continue on probation by achieving a sessional grade point average of at least 1.60 in each session until such time as they return to good standing.

5. **Suspended or refused further registration**
   Students who, by the end of a given session, have not either cleared probation or achieved a sessional grade point average of at least 1.60 shall be liable for suspension or refusal of further registration as follows, regardless of the number of credits taken in the session:
   - Students who have incurred no previous suspension will be suspended for four months (one session).
   - Students who have previously incurred a four-month (one-session) suspension will be suspended for twelve months (three sessions).
- Students who have previously incurred a twelve-month (three-session) suspension will be suspended for thirty-six months (nine sessions).
- Students who have previously incurred a thirty-six month (nine-session) suspension will be refused further registration.

**Policies and procedures governing students on probation**

1. Students placed on probation are required to take a course load that does not exceed 2.0 full credits per session.
   - Upon notification of probation, students enrolled in future sessions must drop all courses above the 2.0 full credits maximum. Failure to do so within 7 days of notification will result in withdrawal from all courses. Students who successfully petition to re-enrol back in to the appropriate course load are subject to a late registration fee.
   - Students who are allowed to continue on probation because they have achieved a sessional grade point average of at least 1.60 may take a normal course load.
2. While on probation, students must meet with an advisor to discuss the reasons which led to the probation and to plan strategies to improve academic performance. (A list of appropriate advisors is available at www.utsc.utoronto.ca/registrar).

**Determination of academic status for students admitted On Probation**

Candidates who fail to satisfy normal admission requirements, but successfully appeal for special consideration may be admitted On Probation.

1. The academic requirements that such students must meet are the same as those required of students who encounter academic difficulties while registered in the university, including course load restrictions. The academic status will remain, “On Probation,” until the student has completed 3.0 credit attempts, at which time a further status will be assigned.
2. Students admitted on probation who achieve a cumulative GPA of 1.60 or higher at that point will be In Good Standing.
3. Students who cumulative GPA is below 1.60 at that point will remain on probation and be subject to the rules regarding academic standing, including probation.
4. Students who are admitted on probation are urged to seek advice on course selection and study methods from the Academic Advising & Career Centre.

**Determination of academic status students re-enrolling at UTSC**

Students who have studied at other institutions since their last registration at U of T Scarborough must arrange for official transcripts of other post-secondary studies to be sent to the University of Toronto Scarborough upon application for re-enrolment. Performance in courses taken elsewhere (including other divisions of the University of Toronto) will be taken into consideration in determining whether to approve the application and whether to make any change in the student's academic status. Students who study at other universities without prior permission from University of Toronto Scarborough are unlikely to be eligible for transfer credit for such study. See also the section "Study at other universities".

**Determination of academic status for students in the Certificate Program in Business**

Academic status is determined at the end of each session as follows for all students who have completed at least two full credits since beginning their studies:

1. In good standing
   - Students who maintain a cumulative grade point average of at least 2.00 are said to be in good standing.
2. Refused further registration
   - Students who, at the end of a given session, have not achieved a cumulative GPA of at least 2.00 or better are refused further registration in the Certificate Program.

**Grade Reports**

Final grades and academic standing are made available through ROSI. Grades are available as soon as they have been submitted and approved. Academic standing is available in September, January and May. Grade reports are sent only to students who are on academic probation, suspended or refused further registration.

**Study at other institutions or other divisions of the University of Toronto**

Courses taken for credit by degree students while registered at the University of Toronto's Faculty of Arts and Science or at the University of Toronto at Mississauga are normally included in University of Toronto Scarborough grade point averages, as are all University of Toronto courses taken for credit while registered at University of Toronto Scarborough. Courses taken while registered at other institutions or other divisions of the University of Toronto are not normally included in grade point averages.

**Courses on other campuses**

**Undergraduate Courses in the Faculty of Arts & Science or at the University of Toronto Mississauga**

Students are permitted to take up to 5.0 full credits in other undergraduate arts and science divisions of the University of Toronto. No more than 1.0 of a student’s first 4.0 full credits as a U of T Scarborough student may be taken on another campus. **(Note: Students who plan on taking fewer than 1.5 credits in their first session as a UTSC student must enrol in UTSC courses only).** Students may be withdrawn from courses after classes have started if their registration violates these rules. (Students who first registered at UTSC in Fall 2002/Winter 2003 or earlier may, if they wish, follow the rules outlined in the 2002/2003 Calendar.)
Note: The Faculty of Arts & Science and the UTM Calendars do not usually list U of T Scarborough courses as exclusions. Students taking such courses must check the U of T Scarborough Calendar for possible exclusions. Students who are in any doubt about whether or not an exclusion exists or whether or not a course can be used to meet a prerequisite of another course or can be applied to a program requirement should consult their program supervisor.

Note: Only programs offered by the University of Toronto Scarborough may be used to fulfill degree requirements.

Courses in Other Faculties Students are not permitted to register for courses in Faculties other than the arts and science divisions of the University unless they have received permission by petition or unless the courses are required by their Specialist or Major Program.

Transfer to other Arts and Science Faculties Students who are contemplating transfers to other divisions of the University should be aware that the University of Toronto Scarborough is in fact a separate faculty and rules covering students at University of Toronto Scarborough may differ from those in the other arts and science divisions. Students are urged to consult the Admissions and Awards Office at 172 St. George Street to establish how they will be affected by transferring from one arts and science division to another.

Study At Other Universities Students who wish to take courses at another university and have credits transferred to U of T Scarborough must receive permission from U of T Scarborough to do so prior to taking the courses. Students who intend to count the courses towards Program requirements must also obtain the approval of the Program Supervisor, in writing. Students who study at other institutions without U of T Scarborough’s approval in advance do so at their own risk since permission to transfer courses for credit is not usually granted after the course has been taken. Duplication of previous study is not permitted. Students who study at another institution after leaving U of T Scarborough are required to supply official transcripts upon re-enrolment. Grades attained at other universities may affect a student's academic status.

There are three types of Programs where transfer credit is considered – Student Exchange Program, Study Elsewhere Program and Letter of Permission. To enhance their academic and cultural experience, students often choose to undergo full-time study at accredited universities abroad. Students go on Student Exchange Programs if they choose universities with which University of Toronto has exchange agreements in place. Where the University of Toronto does not have any exchange agreements in place with the universities at which students intend to study, they can apply to go on the Study Elsewhere Program. One advantage of the Student Exchange Program is that students pay their regular tuition fees at the University of Toronto. A Letter of Permission allows a student to study at a university similar in setting to the University of Toronto and usually, students are studying on a part-time basis. As you will note below, the regulations governing the programs differ. Another option for studying abroad is through the Summer Abroad Program administered by Woodsworth College, where Faculty of Arts and Science (St. George Campus) courses are being offered at several locations around the world. Woodsworth College welcomes applications from U of T Scarborough students. The limits specified above in the "Courses on other campuses" section of this Calendar apply. Assistance with applying to study abroad opportunities offered by the University of Toronto, is available from the International Student Centre (ISC) at U of T Scarborough. Consult the ISC in the Instructional Centre, Room IC345, at 416-208-2905, or at isc@utsc.utoronto.ca.

Grades and Accountability Students registering in courses offered by the University of Toronto earn credit and receive grades in the normal manner. To receive credit for other courses, the student must earn one full grade higher than the minimum passing grade (i.e. a C minus or better at universities using a grading scale similar to that of the University of Toronto). Grades are not recorded on transcripts and are not included in any grade point averages. Therefore, students taking courses for transfer credit will not be able to improve their grade point averages. However, grades achieved may be taken into consideration for award eligibility if achievement is excellent or, if achievement is poor, may affect academic standing or program status. Students must arrange for the host universities to send official transcripts to U of T Scarborough promptly after completion of their courses. Students who do not register or who withdraw without academic penalty must still arrange for a letter from the Registrar of the host university confirming this. Failure to meet this or the minimum grade requirement will result in the notation of "no credit" or "failure" being entered on the student's transcript at the University of Toronto.

Fees and Aid Students on Letters of Permission or in a Study Elsewhere program pay the appropriate fees to the host university. Those in Student Exchange programs pay tuition fees to the University of Toronto. Students who would be eligible for financial assistance through the Ontario Student Assistance Program for study at U of T Scarborough may be eligible for similar assistance. Consult Admissions and Awards (172 St. George Street) at 416-978-2190.

1. Letters of Permission
Application available at: www.utsc.utoronto.ca/registrar
Deadline to apply: Apply at least three weeks prior to the start of the course. (Also pay attention to deadlines at the host universities.)

To take a course at another university, students must, in advance, apply for and receive a "Letter of Permission" from U of T Scarborough. To be considered, a student must have completed 4.0 full credits at U of T Scarborough and be in good standing. Courses requested must be appropriate for degree credit at U of T Scarborough. In addition the student must give reasons why
of study. A maximum of 5.0 full credits will be considered for transfer. The number of transfer credits given on admission may affect eligibility for consideration or the number of transfer credits allowed to be taken while on Study Elsewhere. Since it may take a considerable amount of time to gather information about foreign universities, students should prepare early to apply. Most often students register at the host university and follow its courses for credit. It is possible that students may arrange to take University of Toronto independent study or supervised reading courses under supervision from University of Toronto faculty.

The application requires details about the proposed courses and asks students to show how the intended studies will enhance their studies at U of T Scarborough. Students who intend to count the courses towards Program requirements must obtain the approval of the Program Supervisor before submitting the application. The application will be reviewed by the Study Elsewhere Committee.

3. **Student Exchange Programs**

   Application available at: www.utsc.isc.ca
   Deadline to apply: Mid January for some programs and late February, for most programs. (Refer to the Centre for International Experience website.)

   The University of Toronto operates several institution-wide student exchange programs, providing excellent opportunities for academic and cultural experiences abroad and in other regions of Canada. Students normally participate in the third year of the four-year honours degree program. To be eligible for consideration, U of T Scarborough normally requires that the applicant have a cumulative grade point average of 2.25 or better. A maximum of 5.0 full credits will be considered for transfer. The number of transfer credits given on admission may affect eligibility for consideration or the number of transfer credits allowed to be taken while on exchange.

   Interested students apply through the Centre for International Experience (CIE). A typical application is comprised of a Scarborough Authorization Form, an application form, academic transcripts, résumé and photos, and two reference letters.
Candidates who qualify for consideration are invited for interviews. Applicants are selected for nomination based on the whole application package, including the interviews. If nominated, the student is asked to complete an application which is then submitted to the host institution by the CIE on behalf of the student. Though it rarely happens, partner institutions reserve the right to refuse nominated students. As the Herstmonceux Castle Program (CUSAP) is not an exchange program the application procedure is different - contact CIE for details.

If accepted, U of T Scarborough students must obtain approval from Program Supervisors and from the Admissions and Transfer Credit Officer at U of T Scarborough for courses they intend to take, using the Course Recommendation Form issued once the student is nominated. For further information regarding studying abroad: www.cie.utoronto.ca/going.htm

A current list of institutions offering undergraduate courses is available at: www.cie.utoronto.ca

For further information please contact:
Student Exchange Program
Centre for International Experience, University of Toronto
33 St. George Street, Room 204, Toronto, ON M5S 2E3
Tel: 416-946-3138, Fax: 416-978-4090
Website: www.cie.utoronto.ca
Email: student.exchange@utoronto.ca

4. U of T Summer Abroad Programs
University of Toronto Summer Abroad programs are administered by Woodsworth College in several countries. Students take regular full-year U of T Faculty of Arts and Science undergraduate degree courses that are relevant to the host site. All classes are taught in English, with the exception of some language courses. Financial aid is available for most programs. Because the Summer Abroad programs offer regular U of T courses, the course code and final grade will appear on the student’s record just as any other U of T course does.

For more information, contact:
Professional and International Programs Office
Woodsworth College
119 St. George St. 3rd Floor
Phone 416-978-8713
e-mail: summer.abroad@utoronto.ca
website: www.summerabroad.utoronto.ca

Note: The limits specified above in the “Courses on other campuses” section of this Calendar apply to the Summer Abroad Program.

Academic transcripts
The academic transcript is the official statement of the academic record of each student.

Contents
The transcript records the following information:
1. Information to identify the student: full name and university student number.
2. The student's academic record, listed chronologically by session.
    each course attempted, its abbreviated title, and its grade including courses from which late withdrawal has been approved (see “Dropping courses” above);
    the sessional grade point average;
    the cumulative grade point average at the end of the session;
    the annual grade point average;
    the student's academic status at the end of the session: in good standing, on academic probation, suspended for four months, suspended for twelve months, suspended for thirty-six months, refused further registration, or suspension deferred;
    completion of Co-operative Program;
    completion of degree and Program requirements, and date of conferral of the degree;
    graduation with high distinction or with distinction.
3. The following kinds of special consideration granted by petition. (See "Special Consideration, Petitions and Appeals" below in this section of the Calendar.)
    withdrawal without academic penalty from a course after the relevant deadline. (See "Standing in a course" above in this section of the Calendar.)
    deferral of suspension;
    award of aegrotat standing;
    other consideration deemed to have altered the academic record.
Ordering Official Copies
Students may obtain copies of their academic transcripts, subject to reasonable notice and upon payment of a fee (per transcript copy). All requests for transcripts are processed centrally at the University of Toronto Transcript Centre on the St. George Campus. Copies of transcripts may be requested via ROSI at the following address: www.rosi.utoronto.ca. Requests may also be made in person or by writing to the University of Toronto Transcript Centre, 100 St. George Street, Room #1006, Toronto, ON M5S 3G3. (See also the U of T Transcript Centre website: www.artsci.utoronto.ca/current/undergraduate/transcripts). Payment by mail should take the form of a cheque, money order, Visa or Master Card payable to “The University of Toronto”. Telephone requests cannot be accepted. To prevent tampering, most institutional recipients insist that the transcript copy be sent directly to them.

Unofficial Copies
Students can obtain an unofficial copy of their academic history at no cost directly from the Student Web Service (ROSI): www.rosi.utoronto.ca

Examinations
Examinations are held at the end of each session. Students who make personal commitments during the examination period do so at their own risk. No special consideration will be given and no special arrangements made in the event of personal commitments. Information regarding dates and times of examinations will not be given by telephone. Students are responsible for reading the timetable carefully and appearing at the time specified. Students taking courses during the day may be required to write evening examinations and students taking evening courses may be required to write day examinations. Examinations (including deferred examinations) may be held on any day of the week. Every effort will be made to avoid scheduling them on Sundays. However, U of T Scarborough reserves the right to do so if necessary.

As soon as they are finalized, examination schedules are posted on the web at: www.utsc.utoronto.ca/registrar
The date of posting is normally no later than:
- August examination period: Mid-July
- December examination period: Mid-November
- April examination period: Mid-March

Examination timetable conflicts
Students scheduled to write two examinations at the same time should report their conflicts through eService on the Registrar’s Office web site (www.utsc.utoronto.ca/registrar). Arrangements will normally be made for students to write both examinations on the same day, with a supervised break. Where the conflict involves a St. George Campus course, arrangements will normally be made for both examinations to be written at University of Toronto Scarborough. Requests for such arrangements must be made no later than two full weeks before the commencement of examinations and will not be considered after that time.

Students with three consecutive examinations
Students may request special arrangements if they are scheduled to write examinations in three consecutive time slots as follows:
- Morning, Afternoon, Evening.
- Afternoon, Evening, Morning
- Evening, Morning, Afternoon
No other combination is considered to be three consecutive time slots. Requests for such arrangements must be made through eService on the Registrar’s Office web site (www.utsc.utoronto.ca/registrar) no later than two full weeks before the commencement of examinations. Requests will not be considered after that time. Note: This accommodation does not apply to students writing deferred examinations (see “B. Final Examinations” in the “Special consideration, petitions and appeals” section of this Calendar.)

Accommodation for Religious Observances
It is the policy of the University of Toronto to arrange reasonable accommodation of the needs of students who observe religious holy days other than those already accommodated by ordinary scheduling and statutory holidays. If the date of a final examination falls on a holy day observed by a student, the student should submit through e-Service, a request for accommodation no later than two full weeks before the commencement of examinations. This will normally be granted. (www.utsc.utoronto.ca/~registrar/general/eservice)

Special consideration regarding examinations
See the “Special consideration, petitions and appeals” section of this Calendar below.

Identification cards
Students will be required to identify themselves at examinations by means of their University of Toronto photo identification card (student card). Students who do not have this card should arrange to obtain one well in advance of the day of their first examination.

Use of calculators in tests and examinations
U of T Scarborough has a policy on the use of calculators in tests and examinations. Students should consult with instructors about whether the use of calculators is permissible in their course and, if so, which models are approved. The use of an unauthorized calculator may be treated as an academic offence.
Examination room regulations
1. All students are advised to familiarize themselves with the Code of Behaviour on Academic Matters which can be found at: www.governingcouncil.utoronto.ca/policies
2. Students are advised to arrive at the examination room at least twenty minutes before the scheduled examination time. Invigilators will begin the actual examination at the scheduled time.
3. No persons shall be allowed in an examination room during an examination except the students writing the examination and those supervising it.
4. Candidates shall bring their photo identification cards (Tcard) and place them in a conspicuous place on their desks. (Students registered in other Faculties or Colleges of the University shall bring their student cards.)
5. Bags and books are to be deposited in areas designated by the invigilator and are not to be taken to the examination desk or table. Students may place their purses and pencil cases on the floor beneath their chairs.
6. The invigilator has the authority to assign seats to candidates.
7. No materials or electronic devices shall be brought into the examination room or used at an examination except those authorized by the Chief Presiding Officer or Examiner. Unauthorized materials include but are not limited to: books, class notes, or aid sheets. Unauthorized electronic devices include but are not limited to: cellular telephones, laptop computers, programmable calculators, MP3 players (such as iPod), Personal Digital Assistants (“PDA” such as Palm Pilot or Blackberry), pagers, electronic dictionaries, Compact Disc Players, and Mini Disc Players.
8. Candidates shall not communicate with one another in any manner whatsoever while the examinations are proceeding.
9. Candidates bringing any unauthorized materials or electronic devices into an examination room or who assist, or obtain assistance from other candidates or from an unauthorized source, are liable to penalties under the Code of Behaviour on Academic Matters, including the loss of academic credit for the course and expulsion from the University.
10. In general, candidates will not be permitted to enter an examination room later than fifteen minutes after the commencement of the examination nor to leave the examination room except under supervision until at least half an hour after the examination has commenced.
11. Candidates shall not leave the examination room within the final ten minutes of an examination, during which time they shall remain quietly seated at their desks.
12. At the conclusion of an examination all writing within the answer books shall cease. The invigilator may refuse to accept the papers of candidates who fail to observe this requirement.
13. Examination books and other material issued for the examination shall not be removed from the examination room without the authority of the invigilator.
14. At the conclusion of an examination all candidates must remain seated until all answer books have been collected. Candidates wishing to leave before the conclusion of an examination must also remain seated until their answer books are collected. The University is not responsible for personal property left in examination rooms.

Special consideration, petitions and appeals
From time to time students may need to ask for special consideration in their academic work or for exceptions to be made to the academic regulations. Such requests normally arise as a result of their being affected by something outside their control, such as illness, accident or the death of a family member. Very occasionally students may find themselves in a situation not foreseen by the regulations or feel that they have been unreasonably affected by a deviation from University Policy or approved practice. If you find yourself in such a situation, it is important that you follow the appropriate procedures and meet any published deadlines.

Policies and deadlines for courses taken on other campuses may differ from those outlined below. See the Faculty of Arts & Science and the University of Toronto Mississauga Calendars for regulations regarding their courses. You are responsible for observing the regulations governing any courses you take on other campuses. However, all U of T Scarborough students must adhere to U of T Scarborough deadlines for petitions and appeals, irrespective of the Campus on which the course is taken.

You should seek special consideration only when there are circumstances which are not only beyond your control but which you could not reasonably have anticipated or overcome and which have seriously affected your studies.

A. Term work
1. If:
   - you are unable to write a term test, or
   - your performance on a test is adversely affected by illness or other extenuating circumstances, or
   - you cannot submit term work by your instructor’s deadlines
   Speak with your instructor as soon as possible to request special consideration. This is granted at his or her discretion. If you wish to appeal your instructor’s decision, speak with or write to the Chair of the Department offering the course.
2. If it is close to the end of term or session and you need an extension of time to complete term work or to write a term test, your instructor jointly with the Departmental Chair may give you an extension for up to a week after the last date to submit term work.
3. If you need more than a week’s extension, you must submit a formal petition (see D below). If your petition is granted, you will be given a deadline by which to complete the work.
B. Final examinations
1. As of the 2010 Summer Session, students may no longer automatically defer final examinations. If you miss a final examination, you will be required to petition through eService on the Registrar’s Office website (www.utsc.utoronto.ca/registrar) within 72 hours of the missed examination. Late petitions will not be accepted.
   - Petitions will be considered only for cases of illness or extreme emergency at the time of an examination.
   - Petitions based on medical grounds must be supported by an original medical certificate stating both that the student was examined and diagnosed at the time of illness and was examined on the day of the exam or immediately after (i.e. the next day). A statement from the physician that merely confirms a report of illness and/or disability made by the student will not be acceptable.
   - If the petition is not based on medical grounds, other supporting documentation must be provided.
   - All supporting documents must be submitted within 10 business days and must be in original form; photocopies or faxes will not be accepted.
   - Petitions to defer final examinations based on vacation, employment, or personal plans will not be considered. The examination period is published in advance and students are expected to be available during this period.
2. If you choose to write an examination, you may not petition to rewrite it. In truly exceptional circumstances such as a significant illness that manifests itself during an examination, you may petition to defer the exam that you have begun (see D below). This would require both corroboration from the examination invigilator and documentation from a health care professional.
3. Deferred examinations for all University of Toronto Scarborough courses are held as follows:
   - exams deferred from April and May are held in the August examination period or the study break that precedes it.
   - exams deferred from August are held in the December examination period or the study break that precedes it.
   - exams deferred from December are held in the April/May examination period or the study break that precedes it.
   **Note:** Deferred examinations in other arts and science divisions of the University may be scheduled at times other than those listed above.
4. You must pay a fee by the given deadline to write any University of Toronto Scarborough deferred examination. Failure to pay the fee will result in loss of privilege to sit the examination.
5. If you are writing deferred examinations, your credit load in the session leading up to the deferred examinations plus the credit weight of deferred examinations you are to write may not exceed 2.5. You will have until the end of the first week of classes in that session to make appropriate adjustments to your course load. Failure to do so by the deadline (see the “Sessional Dates” section of the Calendar) will result in the cancellation of all your courses. Exceptions will be made only where there is strong and compelling evidence that a student can handle a larger course load.
6. You are given only one opportunity to sit a deferred exam and are expected to be available for the entire deferred examination period.
7. If you miss a deferred examination, you will receive a mark of zero for the examination in the calculation of your final grade in the course. Only under exceptional circumstances (e.g. hospitalization or severe personal emergency), and when supported by strong and compelling evidence, will a petition for a second deferral of the examination be considered.
8. Under truly exceptional circumstances, students who will unavoidably be outside the Toronto area during the special examination period may petition for permission to write at an outside centre. Such a petition must detail the reasons for the request and must be submitted at least three weeks prior to the beginning of the deferred examination period. Late requests cannot be accommodated. A non-refundable fee of $30.00 for each examination to be written at an outside centre is charged in addition to the regular deferred examination fee of $70.00. Students who are given permission to write at an outside centre are also responsible for all costs of invigilation, courier charges and other related expenses. Since these may exceed $100.00 per examination, students are advised to assess the total costs before petitioning.

C. Marks and Grades
1. Checking Marks: Term Work
   If you think that your mark on a term test or assignment has been calculated incorrectly, ask your instructor to check the mark. Do this as soon as possible and certainly before the end of the session. If you wish to appeal an instructor’s decision about the grading of term work, speak with or write to the Chair of the Department offering the course.
2. Copies of final examinations
   Within ninety days of the relevant examination period you may obtain a photocopy of your final exam using eService on the Registrar’s Office webpage. After that date, examinations are destroyed. A non-refundable fee is charged.
   **Note:** Some departments do not permit copying of final examinations for particular courses. In these cases students will be given procedures for alternate arrangements via eService.
3. Clerical Check of Marks: Final Examinations
   If you think there is an error in the calculation of your final grade, within ninety days of the relevant examination period you may request a recheck of the calculation using eService on the Registrar’s Office webpage. (It is not necessary to purchase a copy of your exam to make this request.) A fee is charged. If an error is discovered which results in a change of the final letter grade, your fee will be refunded. **Whenever a grade is changed, the amended grade will stand whether it is higher or lower.** Please note that before submitting any failing grade, instructors are required to re-read the final exam and recheck the calculation of term and final marks.
**Special consideration, petitions and appeals**

4. **Review Assigned Grades**
   If you feel a mark should be reviewed on term work returned to you only after the end of term and after the instructor has submitted grades for the course, you may submit a formal petition (see D below). This must be done within ninety days of the relevant examination period.
   If, after reviewing a copy of a final examination, you wish to request that it be re-read, you may submit a petition for re-reading (see D below). You must do this within ninety days of the relevant examination period.
   When authorized, the re-reading is arranged by the Department offering the course, which also authorizes any change in grade. Normally the re-reading is done by the course instructor, unless you make a convincing argument that the work be re-read by another faculty member. Claims of prejudice must be supported in detail and wherever possible confirmed by a third party. Whenever a grade is changed, the amended grade will stand whether it is higher or lower.

5. **Violations of the Grading Practices Policy**
   (a) If you think an instructor has violated the Grading Practices Policy, discuss your complaint with the instructor. If the violation relates to the announced schedule of assignments or the marking scheme, you must do this no later than the fourth week of classes. If it relates to changes in or divergence from the announced marking scheme, you must do this before the end of the final examination period.
   (b) If this discussion does not result in a satisfactory solution, you may appeal the instructor’s decision to the Chair of the Department offering the course. If this appeal does not resolve the problem, you may appeal to the Vice-Principal (Academic) & Dean of UTSC.
   (c) If you wish to withdraw from a course after the last day to withdraw without academic penalty on the grounds of a violation of the Grading Practices Policy, you must submit a formal petition (see D below). If your petition is granted because a violation of the Policy has occurred, no record of your registration in the course will appear on your transcript. You cannot petition to withdraw from a course on the grounds that no work was returned to you before the last day to withdraw without academic penalty if this is the result of your having been given an extension to complete your work for reasons relating to you and not the rest of your class.

**D. Petitions**
A petition is a formal request that an exception to an academic regulation be made in your case. You must have good reason to make such a request, and you must show that you have acted responsibly and with good judgment in observing the academic regulations to the extent possible. Please note that some academic matters cannot be petitioned, although sometimes these may be resolved with an instructor or a Department offering a course.

Where a petition is justified, it must be filed by the appropriate deadline (see E below). Even if a petition has been filed by the deadline, it will not be considered if documentation is not provided within ten business days of its submission (three business days for requests to add a course late).

Petitions are submitted online using eService. This service can be found on the Registrar’s Office webpage at www.utsc.utoronto.ca/registrar

1. If you think the issue is simple and the solution straightforward, you may not need advice or assistance with your petition. However, if there are more complex academic issues involved you may want to speak first with your instructor, program supervisor or discipline representative. If serious personal problems are involved, you should meet with an academic advisor in the Academic Advising & Career Centre or a personal counsellor in the Health and Wellness Centre. Do not let this recommendation interfere with your submitting your petition by the deadline.

2. Submit whatever documentation is necessary to support your request.
   (a) Medical certificates must show
      - that you were examined at the time of illness
      - the degree of disability involved
      - the duration of the disability
      - the practitioner’s professional opinion as to whether you should receive special consideration on medical grounds.
      You are urged to use the University of Toronto Scarborough Student Medical Certificate for this purpose. A copy of the Student Medical Certificate may be downloaded from www.utsc.utoronto.ca/registrar – select the e-Service tab. Medical documentation for examinations missed because of illness must be obtained on the day of the examination whenever possible.
   (b) Statements from social workers, lawyers, clergy and other professionals must
      - state the nature and extent of the problem
      - give his or her professional opinion as to whether you should receive special consideration on the grounds documented in your petition.

3. Petitions for re-reading of final examinations and of term work returned to you after the end of a session and after the instructor has submitted grades for the course will be granted only if you
   - articulate clear grounds for reconsideration, addressing the substance of an answer in relation to the mark given it or otherwise identifying the nature of the alleged misevaluation;
   - show that the alleged misevaluation is of a substantial nature: in an objective answer, that a correct response has been counted as incorrect, or in a subjective or essay answer, that the response has been under-evaluated substantially.
• support your argument with evidence or documentation that must be submitted with the petition as well as a photocopy of the final examination (when available). See section on "Copies of final examinations" above.

4. You will be notified online via eService of the decision on your petition. The petitions office attempts to respond as quickly as possible, normally within three weeks of submission. Please do not inquire about the progress of your petition within that period. Complex cases and petitions submitted during very busy periods may take longer.

5. If your petition is granted, the following will be recorded on your transcript (academic record):
   • withdrawal from courses after the published deadline (LWD or WDR depending on the circumstances)
   • deferral of suspension ("suspension deferred")
   • award of aegrotat standing (AEG).

In cases of error on the part of the University, including violations of the Grading Practices Policy, withdrawal from courses is not recorded on the transcript.

E. Deadlines
The deadlines below apply to the University of Toronto Scarborough. Deadlines and policies for courses taken on other campuses may differ: see the appropriate Faculty Calendar.

1. Term Work
   • requests for special consideration on term assignments and term tests within the jurisdiction of the instructor: last day of classes
   • petitions to submit term assignments or write make-up term tests after the last day to submit term work (see the Calendar): last day of the examination period

2. Final Examinations
   Summer, Fall and Winter Sessions
   • petitions to write deferred examinations: 72 hours after the missed examination.

3. Missed Deferred Examinations
   • petitions to write a deferred examination which has been missed: 72 hours after the missed examination.

4. Errors in Course Registration or Withdrawal From Courses
   • petitions to correct errors in course registration or to withdraw from courses without academic penalty after the published deadline should be submitted as early as possible but not later than: January 31 (Fall Session courses); May 31 (Fall/Winter or Winter Session courses); September 30 (Summer Session courses)

5. Checking of Marks and Appeal of Grades
   • requests for checking of marks on term tests, essays and other term work made to the instructor of a course: last day of classes
   • petitions for reconsideration of term work returned to you after the end of term: ninety days after the relevant examination period
   • requests for a photocopy of a final examination: ninety days after the relevant examination period
   • requests for recalculation of marks through the Registrar’s Office: ninety days after the relevant examination period
   • petitions for re-reading of a final examination: ninety days after the relevant examination period

F. Appeals
The Registrar (or designate) has adjudicatory power over petitions. Students who are not satisfied with the decision made by the Registrar (or designate) on a petition may request that this decision be reviewed by the Sub-committee on Standing. Such requests must be submitted using a Request for Petition Review form available at the Office of the Registrar, Room AA142. Such requests must be submitted no later than ninety days after the decision of the Registrar (or designate) has been communicated to you. You will be notified, via eService, when the Sub-committee on Standing has reviewed the decision of the Registrar (or designate). In novel or previously unexplored circumstances the Registrar (or designate) may take a petition directly to the Subcommittee on Academic Appeals.

Students who wish to appeal a decision of the Sub-committee on Standing, may appeal to the Sub-committee on Academic Appeals. You must file a Notice of Appeal on the form provided for this purpose by the Secretary to the Committees of Council & Academic Integrity Officer, Room AA433, no later than ninety days after the decision of the Subcommittee on Standing has been posted in eService. You will be informed, in writing, of the Committee's decision.

Students who are not satisfied with the decision made by the Sub-committee on Academic Appeals may submit an appeal to the Academic Appeals Committee of Governing Council. You must file a Notice of Appeal to the Office of the Governing Council; Judicial Affairs Office on the form provided for this purpose no later ninety days after the decision being appealed has been communicated to the student in writing. The normal time for a hearing and response at this level of appeal may extend from several months to almost a year.

For full information contact:
The Academic Appeals Committee of the Governing Council
University of Toronto
Simcoe Hall, Room 106
University of Toronto Policies

As members of the University of Toronto community, students assume certain responsibilities and are guaranteed certain rights and freedoms. The University has several policies that are approved by the Governing Council and which apply to all students. Each student must become familiar with the policies. The University will assume that he or she has done so. The rules and regulations of the Faculty are displayed in this Calendar. In applying to the Faculty, the student assumes certain responsibilities to the University and the Faculty and, if admitted and registered, shall be subject to all rules, regulations and policies cited in the Calendar, as amended from time to time.

All University policies can be found at: http://www.governingcouncil.utoronto.ca/policies.html

Those which are of particular importance to students are:

- Policy on Access to Student Academic Records
- Code of Behaviour on Academic Matters
- Code of Student Conduct
- Grading Practices Policy
- Policy on Official Correspondence with Students

More information about students’ rights and responsibilities can be found at:

www.viceprovoststudents.utoronto.ca/publicationsandpolicies/rights-and-responsibilities.htm

Maps

For directions to the University of Toronto Scarborough and for campus maps, go to: www.utsc.utoronto.ca/advancement/find
# Index

## A

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advising</td>
<td>11</td>
</tr>
<tr>
<td>Academic Calendar</td>
<td>6</td>
</tr>
<tr>
<td>Academic Regulations &amp; Student Responsibilities</td>
<td>316</td>
</tr>
<tr>
<td>Academic Resources and Student Services</td>
<td>10</td>
</tr>
<tr>
<td>Academic Standing</td>
<td>320</td>
</tr>
<tr>
<td>AccessAbility Services</td>
<td>11</td>
</tr>
<tr>
<td>Admissions</td>
<td>311</td>
</tr>
<tr>
<td>Admission Awards</td>
<td>315</td>
</tr>
<tr>
<td>Admission &quot;On Condition&quot;</td>
<td>322</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>312</td>
</tr>
<tr>
<td>Admission with Transfer Credit</td>
<td>313</td>
</tr>
<tr>
<td>Application Procedures &amp; Deadlines</td>
<td>311</td>
</tr>
<tr>
<td>Contact information, offices</td>
<td>311</td>
</tr>
<tr>
<td>Decisions, how they are made</td>
<td>314</td>
</tr>
<tr>
<td>English Facility Requirements</td>
<td>312</td>
</tr>
<tr>
<td>Mature Students</td>
<td>313</td>
</tr>
<tr>
<td>Non-Degree Students</td>
<td>19, 314</td>
</tr>
<tr>
<td>Senior Citizens</td>
<td>313</td>
</tr>
<tr>
<td>Aegrotat Standing</td>
<td>320</td>
</tr>
<tr>
<td>African Studies</td>
<td>30</td>
</tr>
<tr>
<td>African Studies Minor Program</td>
<td>30</td>
</tr>
<tr>
<td>Anthropology</td>
<td>31</td>
</tr>
<tr>
<td>Anthropology Major Program</td>
<td>33</td>
</tr>
<tr>
<td>Anthropology Minor Program</td>
<td>33</td>
</tr>
<tr>
<td>Anthropology Specialist (Co-operative) Program</td>
<td>33</td>
</tr>
<tr>
<td>Program</td>
<td>32</td>
</tr>
<tr>
<td>Anthropology Specialist Program</td>
<td>32</td>
</tr>
<tr>
<td>Medical Anthropology Specialist Program</td>
<td>33</td>
</tr>
<tr>
<td>Appeals</td>
<td>327</td>
</tr>
<tr>
<td>Applied Microbiology (formerly Industrial Microbiology)</td>
<td>39</td>
</tr>
<tr>
<td>Applied Microbiology Specialist (Joint) Program</td>
<td>39</td>
</tr>
<tr>
<td>Approved Individual Programs</td>
<td>20</td>
</tr>
<tr>
<td>Art and Culture Specialist Program</td>
<td>282</td>
</tr>
<tr>
<td>Art and Culture Specialist (Co-operative) Program</td>
<td>165</td>
</tr>
<tr>
<td>Program - Studio</td>
<td></td>
</tr>
<tr>
<td>Art History</td>
<td>283</td>
</tr>
<tr>
<td>Art History Major Program</td>
<td>284</td>
</tr>
<tr>
<td>Art History Major (Co-operative) Program</td>
<td>165</td>
</tr>
<tr>
<td>Art History Minor Program</td>
<td>284</td>
</tr>
<tr>
<td>Arts Management</td>
<td>288</td>
</tr>
<tr>
<td>Arts Management Specialist Program</td>
<td>288</td>
</tr>
<tr>
<td>Arts Management Specialist (Co-operative) Program</td>
<td>28</td>
</tr>
<tr>
<td>Program</td>
<td></td>
</tr>
<tr>
<td>Astronomy</td>
<td>42</td>
</tr>
<tr>
<td>Astronomy and Astrophysics Minor Program</td>
<td>43</td>
</tr>
<tr>
<td>Astrophysics And Physics Major Program (see Physics and Astrophysics section)</td>
<td></td>
</tr>
<tr>
<td>Athletics &amp; Recreation</td>
<td>11</td>
</tr>
<tr>
<td>Awards</td>
<td>315</td>
</tr>
<tr>
<td>Graduation Awards; Honours List; In-Course</td>
<td>315</td>
</tr>
</tbody>
</table>

## B

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry Major Program</td>
<td>71</td>
</tr>
<tr>
<td>Biochemistry Major (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Biological Chemistry Specialist Program</td>
<td>69</td>
</tr>
<tr>
<td>Biological Chemistry Specialist (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Program</td>
<td></td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>44</td>
</tr>
<tr>
<td>Applied Microbiology Specialist (Joint) Program</td>
<td>39</td>
</tr>
<tr>
<td>Biodiversity, Ecology and Evolution Major Program</td>
<td>56</td>
</tr>
<tr>
<td>Biodiversity, Ecology and Evolution Specialist Program</td>
<td>46</td>
</tr>
<tr>
<td>Biology Major Program</td>
<td>58</td>
</tr>
<tr>
<td>Biology Minor Program</td>
<td>60</td>
</tr>
<tr>
<td>Cell and Molecular Biology Specialist Program</td>
<td>47</td>
</tr>
<tr>
<td>Cell and Molecular Biology Specialist (Co-operative) Program</td>
<td>49</td>
</tr>
<tr>
<td>Conservation Biology Specialist Program</td>
<td>51</td>
</tr>
<tr>
<td>Conservation Biology Specialist (Co-operative) Program</td>
<td>51</td>
</tr>
<tr>
<td>Human Biology Major Program</td>
<td>58</td>
</tr>
<tr>
<td>Human Biology Specialist Program</td>
<td>51</td>
</tr>
<tr>
<td>Integrative Biology Specialist Program</td>
<td>53</td>
</tr>
<tr>
<td>Paramedicine Specialist (Joint) Program</td>
<td>224</td>
</tr>
<tr>
<td>Business Certificate</td>
<td>197</td>
</tr>
<tr>
<td>Academic Status in</td>
<td>321</td>
</tr>
<tr>
<td>Certificate Program Requirements</td>
<td>19, 197</td>
</tr>
<tr>
<td>Career Counselling</td>
<td>10</td>
</tr>
<tr>
<td>Cell And Molecular Biology Specialist Program</td>
<td>47</td>
</tr>
<tr>
<td>Cell And Molecular Biology Specialist (Co-operative) Program</td>
<td>49</td>
</tr>
<tr>
<td>Centennial College, Joint Programs</td>
<td>23</td>
</tr>
<tr>
<td>Centre for Teaching and Learning</td>
<td>12, 67</td>
</tr>
<tr>
<td>Chemistry</td>
<td>68</td>
</tr>
<tr>
<td>Biochemistry Major Program</td>
<td>71</td>
</tr>
<tr>
<td>Biochemistry Major (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Biological Chemistry Specialist Program</td>
<td>68</td>
</tr>
<tr>
<td>Biological Chemistry Specialist (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Program</td>
<td></td>
</tr>
<tr>
<td>Chemistry Major Program</td>
<td>71</td>
</tr>
<tr>
<td>Chemistry Major (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Chemistry Specialist Program</td>
<td>70</td>
</tr>
<tr>
<td>Chemistry Specialist (Co-operative) Program</td>
<td>234</td>
</tr>
<tr>
<td>Child Care Centre</td>
<td>14</td>
</tr>
<tr>
<td>City Studies</td>
<td>75</td>
</tr>
<tr>
<td>City Studies Major Program</td>
<td>75</td>
</tr>
<tr>
<td>City Studies Major (Co-operative) Program</td>
<td>77</td>
</tr>
<tr>
<td>Classical Studies</td>
<td>79</td>
</tr>
<tr>
<td>Classical Studies Minor Program</td>
<td>79</td>
</tr>
<tr>
<td>Cognitive Science</td>
<td>82</td>
</tr>
<tr>
<td>Computer Science</td>
<td>83</td>
</tr>
<tr>
<td>Computer Science Major Program</td>
<td>87</td>
</tr>
<tr>
<td>Computer Science Minor Program</td>
<td>88</td>
</tr>
<tr>
<td>Computer Science Specialist Program</td>
<td>83</td>
</tr>
<tr>
<td>Computer Science Specialist (Co-operative) Program</td>
<td>86</td>
</tr>
<tr>
<td>Computing &amp; Networking Services (IITS)</td>
<td>13</td>
</tr>
<tr>
<td>Concurrent Teacher Education Program (CTEP)</td>
<td>92</td>
</tr>
<tr>
<td>Conditional Admission</td>
<td>322</td>
</tr>
<tr>
<td>Conservation Biology Specialist Program</td>
<td>51</td>
</tr>
<tr>
<td>Conservation Biology Specialist (Co-operative) Program</td>
<td>51</td>
</tr>
<tr>
<td>Co-operative Programs</td>
<td>21</td>
</tr>
<tr>
<td>General Information</td>
<td>21</td>
</tr>
<tr>
<td>in English</td>
<td>165</td>
</tr>
<tr>
<td>in Humanities &amp; Social Sciences</td>
<td>165</td>
</tr>
<tr>
<td>in Philosophy</td>
<td>165</td>
</tr>
<tr>
<td>in Physical Sciences</td>
<td>234</td>
</tr>
<tr>
<td>in Management</td>
<td>191</td>
</tr>
</tbody>
</table>
in Social Science & Humanities 269
Counselling Services 11, 13, 16
Courses 27
Course Changes 319
Course Description, how to read 29
Courses on other Campuses 292
Credit /No Credit 28, 320
Dropping Courses 319
Exclusions, Prerequisites, and Corequisites 27
Extra 321
Selection 318
Supervised Reading/Research Courses 28
Pass / Fail 28, 320
WebOption Courses 28

D

Dates & Deadlines, Sessional 6
Debts to the University 316
Degree Navigator 317
Degrees 18
Graduation with High Distinction, or Distinction 18
Requirements 18
Three Year Degree, upgrading 19
“Second Degree” Requirements 19
Non-Degree Students 19
Departmental Structure 9
Diaspora and Transnational Studies 95
Diaspora And Transnational Studies Major Program 96
Diaspora And Transnational Studies Minor Program 98
Drama (see Theatre & Performance Studies)

E

Economics for Management Studies 98
Economics for Management Studies Major Program 100
Economics for Management Studies Minor Program 101
Economics for Management Studies Specialist Program 100
Economics for Management Studies Specialist (Co-operative) Program 100
English 107
English Literature Minor Program 108
Literature and Film Studies Minor Program 108
English Major Program 108
English Major (Co-operative) Program 165
English Specialist Program 107
English Specialist (Co-operative) Program 165
Enrolment Limits 316
Environmental Science 118
Environmental Biology Specialist Program 119
Environmental Biology Specialist (Co-operative) Program 234
Environmental Chemistry Specialist Program 120
Environmental Chemistry Specialist (Co-operative) Program 234
Environmental Geoscience Specialist Program 120
Environmental Geoscience Specialist (Co-operative) Program 234
Environmental Physics Specialist Program 121
Environmental Physics Specialist (Co-operative) Program 234
Environmental Science Major Program 122

Environmental Science Major (Co-operative) Program 234
Environmental Science Minor Program 123
Environmental Science Major Program - General Environmental Science Stream 123
Environmental Science Major Program - Environmental Biology Stream 123
Environmental Science Major Program - Water Science Stream 123
Environmental Science and Technology 128
Environmental Science And Technology Specialist (Joint) Program 128
Examination 326
Regulations 316, 326, 327
Exchange Programs 324
Exclusions (See Courses) 324
Extra Courses 321

F

Fees Payment 318
Final Examinations (see "Examination") 315
Financial Aid & Awards Office 15
French 130
Concurrent Teacher Education Program (CTEP) 92
French as a Second Language Minor Program 132
French For Francophones Minor Program 132
French Major Program 132
French Major (Co-operative) Program 165
French Minor Program 132
French Specialist Program 131
French Specialist (Co-operative) Program 165

G

Geography 137
Human Geography Major Program 137
Human Geography Minor Program 139
Physical and Human Geography Major Program 139
Global Asia Studies 144
Global Asia Studies Major Program 145
Global Asia Studies Minor Program 146
Global Asia Studies Specialist Program 144
Grades 320
Academic Status: Good Standing, Probation 321
Grade Point Average (GPA) 321
Grade Reports 321
Graduation Awards, Distinction & High Distinction 315
Greetings from the Principal 2
Guide to Programs & Courses Offered at UTSC 24

H

Health Studies 150
Health Studies Major Program 151
Health Studies Major (Co-operative) Program 151
Health Studies Minor Program 153
Health and Dental Plan (see SCSU) 13
Health & Wellness Centre 155
History 156
History Major Program 156
History Major (Co-operative) Program 165
History Minor Program 156
History Specialist Program 156
History Specialist (Co-operative) Program 165
Honours List 315
Human Biology Major Program 58
Human Biology Specialist Program 51
Human Geography Major Program 137
Human Geography Minor Program 139
Humanities 164
Humanities & Social Sciences Co-operative 165
Arts & Culture Specialist (Co-operative) Program 165
Art History Major (Co-operative) Program 165
English Specialist (Co-operative) Program 165
English Major (Co-operative) Program 165
French Specialist (Co-operative) Program 165
French Major (Co-operative) Program 165
History Specialist (Co-operative) Program 165
History Major (Co-operative) Program 165
Linguistics Specialist (Co-operative) Program 165
Linguistics Major (Co-operative) Program 165
Music & Culture Major (Co-operative) Program 165
Philosophy Specialist (Co-operative) Program 165
Philosophy Major (Co-operative) Program 165
Psycholinguistics Specialist (Co-operative) Program 165
Theatre & Performance Major (Co-operative) Program 165
Women's and Gender Studies Major (Co-operative) Program 165

I

Important Notices 4
Industrial Microbiology (see Applied Microbiology) 13
Information & Instructional Technology Services 13
Integrative Biology Specialist Program 53
Interfaculty Combination Program In International Development And Environmental Studies Program 171
International Development Studies 166
International Development Studies Major Program 170
International Development Studies Minor Program 171
International Development Studies Specialist (Co-operative) Program (B.A.) 170
International Development Studies Specialist Program 169
International Student Centre 13
International Studies 173
International Studies Major Program 173
International Studies Major (Co-operative) Program 173
Intersections, Exchanges, Encounters in the Humanities 173
Intersections, Exchanges, Encounters In The Humanities Major Program 174

J

Joint Programs with Centennial College 23
Journalism 176
Journalism Specialist (Joint) Program 176

L

Languages 179
Language Citation 23, 131, 179
Letters of Permission 323
Library Services 14
Life Sciences (see Biological Sciences) 184
Linguistics 184
Linguistics Major Program 186
Linguistics Major (Co-operative) Program 165
Linguistics Minor Program 186
Linguistics Specialist Program 185
Linguistics Specialist (Co-operative) Program 165
Psycholinguistics Specialist Program 185
Psycholinguistics Specialist (Co-operative) Program 165
Literature and Film Studies Minor Program 108

M

Management 189
Admissions to the program 190
Co-operative Programs in Management 191
Certificate in Business 19, 197, 322
Economics for Management Studies Specialist Program 193
Management And Accounting Specialist Program 194
Management And Finance Specialist Program 195
Management And Human Resources Specialist Program 195
Management And Information Technology Specialist Program 196
Management in International Business (Co-operative) Program Specialist 192
Management And Marketing Specialist Program 196
Management Specialist Program 194
Strategic Management Specialist Program 197
Maps 331
Marks and Grades 328
Mathematics 206
Mathematics Major Program 209
Mathematics Major (Co-operative) Program 193
Mathematics Specialist Program 207
Mathematics Specialist (Co-operative) Program 234
Media Studies 213
Media Studies Major Program 213
Media Studies Minor Program 214
Medical Anthropology Specialist Program 33
Mental Health Studies Major Program 254
Mental Health Studies Specialist Program 253
Mental Health Studies Specialist (Co-operative) Program 254
Music And Culture 292
Music and Culture Major Program 292
Music and Culture Major (Co-operative) Program 165
Music And Culture Minor Program 293

N

Natural Sciences Specialist Program 236
Neuroscience 216
Neuroscience Major Program 219
Neuroscience Specialist Program 217
Neuroscience Specialist (Co-operative) Program 218
New Media Studies 221
New Media Studies Major (Joint) Program 221
No Credit 28, 320
Non-Degree Students 19, 314
N'sheemaehn: Child Care Centre 14

O

Office of Student Affairs 15
Officers of the University of Toronto Scarborough 16
Ombudsperson, University 16
Other Campuses, Courses on 322
Overall Standing, Academic 321

P

Languages 179
Language Citation 23, 131, 179
Letters of Permission 323
Library Services 14
Life Sciences (see Biological Sciences) 184
Linguistics 184
Linguistics Major Program 186
Linguistics Major (Co-operative) Program 165
Linguistics Minor Program 186
Linguistics Specialist Program 185
Linguistics Specialist (Co-operative) Program 165
Psycholinguistics Specialist Program 185
Psycholinguistics Specialist (Co-operative) Program 165
Literature and Film Studies Minor Program 108
Paramedicine 224
Paramedicine Specialist (Joint) Program 224
Pass / Fail (see Courses) 327, 329
Petitions Procedure 228
Philosophy Major Program 229
Philosophy Major (Co-operative) Program 165
Philosophy Minor Program 229
Philosophy Specialist Program 229
Philosophy Specialist (Co-operative) Program 165
Physical And Human Geography Major Program 139
Physical And Mathematical Sciences Specialist (Co-operative) Program 235
Physical Sciences 234
Natural Sciences Specialist Program 236
Physical Sciences Major Program 240
Physical Sciences Major (Co-operative) Program 235
Physics and Astrophysics 237
Physics and Astrophysics Major Program 241
Physics and Astrophysics Major (Co-operative) Program 235
Physics and Astrophysics Specialist Program (formerly Physics and Its Applications) 238
Physics and Astrophysics Specialist (Co-operative) Program 235
Physical And Mathematical Sciences Specialist Program 237
Physical And Mathematical Sciences Specialist (Co-operative) Program 235
Police Services 17
Political Science 243
Political Science Major Program 244
Political Science Minor Program 245
Political Science Specialist Program 244
Public Policy Major Program 245
Public Policy Major (Co-operative) Program 246
Prerequisites (see Courses)
Probation, Academic 321, 322
Programs & Courses Offered at UTSC, Guide 24
Programs of Study 19, 24, 319
Specialist; Major; Minor; Approved Individual Programs; Co-operative Programs; Joint Programs; Program Transfers; Regulations; Registration in Program Regulations 20
Program Withdrawal, Registration in 21
Psycholinguistics Specialist Program 185
Psycholinguistics Specialist (Co-operative) Program 165
Psychology 252
Psychology Major Program 259
Psychology Minor Program 259
Psychology Specialist Program 256
Psychology Specialist (Co-operative) Program 257
Mental Health Studies Major Program 256
Mental Health Studies Specialist Program 253
Mental Health Studies Specialist (Co-operative) Program 254
Public Policy Major Program 245
Public Policy Major (Co-operative) Program 246
Quantitative Analysis Specialist Program 277
Quantitative Analysis Specialist (Co-operative) Program 235
Re-enrolment 322
Refusal of Further Registration 321, 322
Registrar’s Office 14
Registration 318
Registration in Programs, Withdrawn 21
Regulations, Academic 316
Regulations, Programs 20
Religion 267
Religion Major Program 267
Religion Minor Program 267
Residence 16
ROSI 317
Scarborough Campus Students’ Union (SCSU) 16
Scholarships (see Awards) 327
Second Degree Requirements (see Degrees) 316
Secondary Schools Prerequisites 312
Senior Administrators, U of T Scarborough 8
Senior Students 314
Sessional Dates 6
Sexual Harassment Office 16
Social Science and Humanities Co-operative 269
Society and Environment 270
Society And Environment Major Program 270
Sociology 270
Sociology Major Program 271
Sociology Minor Program 271
Sociology Specialist (Co-operative) Program 271
Sociology Specialist Program 271
Special Consideration, Petitions, and Appeals 327
Standing
Academic Status 321
In a Course 320
Overall 321
Statement of Human Rights 4
Statement of Institutional Purpose 4
Statistics 277
Statistics Major Program 279
Statistics Major (Co-operative) Program 235
Statistics Minor Program 279
Quantitative Analysis Specialist Program 277
Quantitative Analysis Specialist (Co-operative) Program 235
Strategic Management Specialist Program 197
Student card (see T-Card) 10
Student Housing & Residence Life 16
Student Life, Department of 12
Student Services 10
Academic Advising & Career Centre 10
AccessAbility Services 11
Athletics & Recreation 11
Centre for Teaching and Learning 12, 67
Department of Student Life 12
Financial Aid & Awards Office 14
Health & Wellness Centre 13
Information & Instructional Technology Services 13
International Student Centre 13
Library 14
N’sheemaehn: Child Care Centre 14
Office of Student Affairs 15
Registrar’s Office 15
Scarborough Campus Student Union (SCSU) 16
Sexual Harassment Office 16
Student Housing & Residence Life 16
University of Toronto Community Police 17
University Ombudsperson 16
Student Web Service 317
Studio 297
Index 336

Studio Major Program 298
Studio Major (Co-operative) Program 165
Studio Minor Program 298
Study At Other Universities 323
Letters of Permission 323
Study Elsewhere Program 324
Student Exchange Programs 324
U of T Summer Abroad Programs 325
Transfer Credit Eligibility 323
Subject POSIs  19, 24, 319
Supervised Reading/Research Courses (See Courses) 321
Suspension, Academic 321

T

T-Card 316
Teaching and Learning, Centre of 12, 67
Term work (see Special Consideration) 303
Theatre and Performance Studies 303
Theatre And Performance Studies Major Program 303
Theatre And Performance Studies (Co-operative) Program 165
Theatre And Performance Studies Minor Program 303
Transcripts, Academic 325
Transfer Credits (See Admissions; Study at Other Universities) 19
Three-Year Degree 319
Tuition & Fees Payment (see Fees Payment) 324

U

University of Toronto Scarborough, History 9
University Ombudsperson 16
University of Toronto Policies 331

V

Visiting Students 314
Visual and Performing Arts 281
Arts and Culture Specialist Program - Studio 282

W

WebOption courses (See Courses) 320
Withdrawal from Session (Summer, Fall, Winter) 306
Women's and Gender Studies 306
Women's And Gender Studies Minor Program 306
Women's And Gender Studies Major Program 165
Women's And Gender Studies Major (Co-operative) Program 165
Writing at U of T Scarborough 10

Y

Year of Study 319
## Changes to the 2012-13 Calendar

<table>
<thead>
<tr>
<th>Page Number</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
<td>Addition: New Major Program in Environmental Studies</td>
</tr>
</tbody>
</table>
| 24          | Changes to Guide to Programs and Courses: New divisions are as follows:  
|             | Arts, Culture and Media (formerly part of Humanities)  
|             | Historical and Cultural Studies (formerly part of Humanities)  
|             | Centre for French and Linguistics (formerly part of Humanities)  
|             | Anthropology (formerly part of Social Sciences)  
|             | Human Geography (formerly part of Social Sciences)  
|             | Political Science (formerly part of Social Sciences)  
|             | Sociology (formerly part of Social Sciences)  
|             | Centre for Critical Development Studies |
| 34          | Anthropology- ANTB15H3 Contemporary Human Evolution and Variation  
|             | *Added exclusion:* HLTB20H3 (Course is not double numbered with HLTB20H3) |
| 78          | City Studies CITC10H3 Selected Issues in City Studies  
|             | *Change in Course Description:* "specific issues with vary,"  
|             | *To:* "specific issues will vary," |
| 83          | Computer Science  
|             | *Change:* New Associate Chair: M. Molloy (416-287-7255) |
| 92          | Computer Science CSCD95H3 Computer Science Project  
|             | *Change in Course Description:* Remove "Note" and replace with "**Enrolment procedures:** Project supervisor's note of agreement must be presented to the Supervisor of Studies,..." |
| 98          | Minor Program in Diaspora and Transnational Studies  
|             | *Change:* JQR360H (The Canadian Census: Populations, Migrations and Dem)  
|             | *To:* JQR360H (The Canadian Census: Populations, Migrations and Demographics) |
| 107         | English Faculty List  
|             | *Change:* C. Hoffman (Assistant Professor) and A. Milne (Assistant Professor) added to the English Faculty List |
| 109         | English  
|             | *Change:* Information about the Co-operative programs in English can no be found directly following the Minor Program in English Literature and Film |
| 119         | English- ENGD98Y3- Senior Essay  
|             | *Change:* Title: Senior Essay and Capstone Seminar |
| 130         | French Faculty List  
|             | *Changes:* Pascal Riendeau- *Associate Professor*; Malama Tsimenis- *Senior Lecturer* |
| 153         | Health Studies-Major Program  
|             | *Changes:* ANTB15H3 with HLTB20H3 Contemporary Human Evolution and Variation, in requirement #3. |
| 154         | Health Studies-Minor Program  
|             | *Changes:* ANTB15H3 with HLTB20H3 Contemporary Human Evolution and Variation, in requirement #3. |
| 155         | Health Studies  
|             | *New Course Added:* HLTB20H3- Contemporary Human Evolution and Variation (Double numbered with ANTB15H3) |
| 174         | Intersections, Exchanges and Encounters  
|             | IEEB01H3- Human, Inhuman and Non-Human  
|             | *Remove:* (*Pending Governance Approval*  
|             | *Changes Approved:* Double Numbered with MDSB01H3, Change in course description, Addition of HUMA01H3 as Recommended Preparation, Addition of MDSB01H3 as an Exclusion. |
| 177         | Intersections, Exchanges and Encounters  
|             | IEEC31H3- Gender, Health, Science in Transnational Perspective  
|             | *Add Prerequisite:* WSTA01H3 or WSTA03H3 and 4.5 additional credits in any discipline |
| 184         | Languages  
|             | LGGD97/LGGD98H3- Experiential Learning in Language Community  
<p>|             | <em>Remove:</em> Permission of Instructor from Prerequisites |</p>
<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
</table>
| 187  | Linguistics  
Specialist Program in Psycholinguistics-Requirement # 5  
*Remove:* "PLIC65H3 Quantitative Methods in Linguistics (highly recommended)"
| 206  | Mathematics  
*Change:* New Associate Chair: M. Evans (416-287-7274)
| 212  | MATC58H3- Mathematics  
*Change:* Breadth Requirement: "Quantitative Reasoning"  
*To:* Breadth Requirement: "Quantitative Reasoning"
| 214  | MDSB01H3- Human, Inhuman and Non-Human  
*Remove:* (*Pending Governance Approval (New Course)*
| 218  | Media Studies  
*New Course:* MDSC62H3- Labour and Media
| 235  | Co-operative Program in Physical Sciences  
Information relocated  
Refer to Chemistry, Environmental Science, Mathematics, and Statistics sections of the Calendar
| 237  | Physics and Astrophysics Section  
*Remove:* A. Griffin,...*Professor Emeritus* and P.J. O'Donnell,...*Professor Emeritus* from the faculty list.  
*Add:* M. Wells,...*Associate Professor* to the faculty list.
| 244  | Physics and Astrophysics Section  
PHYD11H3- Computational Physics Project  
*Change:* Remove Co-requisite  
*Add as Prerequisite:* 14.0 credits, cumulative GPA of at least 2.5 and permission from the coordinator
| 252  | Political Science  
New course added = POLC09H3- International Security: Conflict, Crisis and War
| 270  | Sociology  
*Change Discipline Rep:* Patricia Landolt  
Email: landolt@utsc.utoronto.ca
| 276  | SOCD50H3- Sociology  
*Change:* Breadth Requirement: "Social and Behavioural Scien"  
*To:* Breadth Requirement: "Social and Behavioural Sciences"
| 277  | Statistics  
*Change:* New Associate Chair: M. Evans (416-287-7274)
| 279  | Statistics-Specialist Program in Quantitative Analysis  
*Change:* New Supervisor of Studies: Sotirios Damouras  
*Email:* sdamouras@utsc.utoronto.ca (416-208-4794)
| 281  | Visual and Performing Arts Faculty  
*Changes:* Michael Schonberg - *Associate Professor Emeritus*
| 291  | Visual and Performing Arts- VPAC15H3 Cultural Policy  
*Remove:* (*) *Pending Governance Approval*  
*Change Approved:* VPAA10H3 added as a prerequisite
| 297  | VMPC97H3- Music and Culture  
*Change:* Breadth Requirement  
*To:* Breadth Requirement: History, Philosophy & Cultural Studies
| 312  | WSTC21H3- Gender, Health, Science in Transnational Perspective  
*Add Prerequisite:* WSTA01H3 or WSTA03H3 and 4.5 additional credits in any discipline.  
*Change:* Breadth Requirement: History, Philosophy & Cultural Studies
| 323  | Study at Other Universities-  
This section has been revised and updated, please see new version online under the "Study at Other Universities," section of the Calendar.